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RAMUS AND THE TRANSIT TO THE MODERN MIND
Walter J. Ong, S.J.

COMPLEXITY OF MATHEMATICAL LOGIC *Continued*
Maurice Meigne, S.J.

THE CAUSAL PROPOSITION—PRINCIPLE OR CONCLUSION? *Continued*
Joseph Owens, C.SS.R.

THE ONTOLOGICAL ARGUMENT IN ST. ANSELM AND DESCARTES
Robert G. Miller, C.S.B.

Notes and Discussion, Book Reviews, Bibliography

Saint Louis University

The College of Philosophy and Letters and the Department of Philosophy, SAINT LOUIS

The Modern Schoolman *is a quarterly journal of philosophy, dedicated to furthering the work begun by the great Schoolmen of the Middle Ages.*

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THE MODERN

SCHOOLMAN

MAY 1955

Ramus and the Transit to the Modern Mind 301
Walter J. Ong, S.J.

Complexity of Mathematical Logic 313
Maurice Meigne, S.J.

The Causal Proposition—Principle or Conclusion? (Cont.) 323
Joseph Owens, C.SS.R.

The Ontological Argument in St. Anselm and Descartes 341
Robert G. Miller, C.S.B.

NOTES AND DISCUSSION

Chronicle 312

BOOK REVIEWS

IBN SINA. *Livre des directives et remarques.* Tr. by A.-M. Goichon 350
Richard Gramlich, S.J.

ROGER TROISFONTAINES, S.J. *De l'existence à l'être: La philosophie de Gabriel Marcel* 352
James Collins

HEINRICH GOMPERZ. *Philosophical Studies* 354
Venant Cauchy

RICHARD B. BALLOU. *The Individual and the State*

ARTHUR E. BESTOR. *Educational Wastelands*

WILLIAM F. CUNNINGHAM, C.S.C. *General Education and the Liberal College*

ROBERT M. HUTCHINS. *The Conflict in Education*

BERNARD E. MELLAND. *Higher Education and the Human Spirit*

HAROLD TAYLOR. *On Education and Freedom* 356
Thomas D. Langan

JAMES COLLINS. *A History of Modern European Philosophy* 360
Vincent Edward Smith

A. C. CROMBIE. *Augustine to Galileo. The History of Science A. D. 400-1650* 362
Vernon J. Bourke

JOHN WILD. *Plato's Modern Enemies and the Theory of Natural Law*

LEO STRAUSS. *Natural Right and History*

EUGENE C. GERHART. *American Liberty and "Natural Law"* 363
Marianne M. Childress

PIERRE DUHEM. *The Aim and Structure of Physical Theory*

VICTOR F. LENZEN. *Causality in Natural Science*

E. G. BARTER. *Relativity and Reality*

HENRY VAN LAER. *Philosophico-scientific Problems* 369
Edward Caldin

ANDRE MARC, S.J. *Dialectique de l'affirmation* 373
Armand Maurer, C.S.B.

BIBLIOGRAPHY 376

INDEX TO VOLUME XXXII 383

Walter J. Ong, S.J.

RAMUS AND THE TRANSIT TO THE MODERN MIND

The Reverend Walter J. Ong, S.J., is assistant professor of English at Saint Louis University. He received his M.A. from Saint Louis University and his Ph. D. from Harvard University. He studied in Europe on a Guggenheim Fellowship (1949-50 and 1951-52); his two resulting books on Renaissance literature, Ramus, Method, and the Decay of Dialogue *and* Ramus and Talon Inventory, *are to appear soon. Father Ong has written for periodicals in the United States and England* (The Modern Schoolman, *the* Month, Essays in Criticism, *and others*), *as well as in France* (Etudes, Psyché, La vie intellectuelle, *and others*) *and in Germany* (Dokumente). *He has contributed to* Twentieth Century English, Immortal Diamond, *and* English Institute Essays.

The present article has previously appeared under the title "Ramus et le monde anglo-saxon d'aujourd'hui," in Revue de littérature comparée, XXVIII *(1954), 57-66, and appears in the present version with the permission of the Editor of the* Revue.

Pierre de la Ramée, or, as he is better known, Petrus Ramus (1515-72), presents to the present English-speaking world an interest which is only with difficulty understandable in France or in most other Continental countries. The reasons for the interest are complex but all more or less intimately connected with the tendency of the Anglo-Saxon mind, ever since the time of the medieval logicians, to generate philosophical thought out of linguistic analysis. Hybridized with the aestheticism which the late nineteenth-century English-speaking world learned largely from France, this tendency has produced today in England, and even more in America, a literary criticism of a sort relatively unknown in France itself. On the Continent generally, the best literary criticism is part of an overtly personalist dialogue which begins in the *salon* and may end anywhere in the cosmos. In America, and to almost the same extent in England, the best literary criticism—or at least a great part of it—often professes to begin with a rigorous consideration of a particular work of art in terms of its own integrity as an object of attention, to the exclusion (at least in principle) of all personality, and

ends by generating—if not explicitly, at least by implication—direct examination of the conditions of knowledge itself and ultimately a kind of metaphysics.

This kind of criticism has grown particularly strong within the past decades and, with it, the feeling that the Renaissance, and the sixteenth century especially, was somehow or other a critical period with regard to linguistic attitudes, that during this period something happened in the way man talks about things, that somewhere after the sixteenth century a "dissociation of sensibility," to use Mr. T. S. Eliot's now well-worn phrase, had become discernible in the way man confronts the world around him.

Ramus is a man of the sixteenth century, and he is eminently a man concerned with language, with the traditional arts of expression—grammar, rhetoric, and logic. As the first and only professor of eloquence and philosophy at what was soon to be called the Collège de France, he stood on the middle ground between linguistics and metaphysics, a kind of humanist-Scholastic. If he is himself no real thinker, all the more reason why the flurry his works created deserves looking into. This flurry is not to be underrated, for an international inventory of his works,[1] which has long been wanting, reveals the astonishing total of nearly 800 separately published editions (including some adaptations) of single or collected works by him or his collaborator, Omer Talon (Audomarus Talaeus, *ca.* 1510-62)—close to 300 editions of the important *Dialectic* alone. Counting separately each of the works in these 800-odd volumes (some of which include more than one item), one gets a total of some 1100 separate printings of individual works. All but a few of these fall in the century roughly between 1550 and 1650.

In the nineteenth century, two sizable studies of Ramus had ap-

[1]I hope soon to publish this inventory, which, together with a detailed study of the significance of Ramism, I have completed with the generous help of the John Simon Guggenheim Memorial Foundation of New York.

[2]A study of the authenticity of this work, based on newly found manuscript material, will soon be ready for publication.

[3]Waddington, *Ramus*, p. 355. The medieval and Renaissance meanings of *thesis* and *hypothesis* were largely controlled by the use of these terms in rhetoric. A non-hypothetical science was not an observational science, as Waddington suggests, but precisely a deductive science. See Ramus's adversary Iacobus Schegkius, *De Demonstratione Libri Quindecim* (Basileae, 1564), p. 124.

[4]P. Dibon, "L'influence de Ramus aux universités néerlandaises du 17e siècle," *Actes du XIème Congrès Internationale de Philosophie*, XIV (Bruxelles, 1953), 307-11

peared, one by Charles Waddington, *Ramus: sa vie, ses écrits, et ses opinions* (Paris, 1855), and the other by Paul Lobstein, *Petrus Ramus als Theologe* (Strasbourg, 1878). Lobstein's sober and discerning work is restricted to Ramus's posthumous *Commentariorum de Religione Christiana Libri Quatuor*[2] and concludes that theologically Ramus stood for a mild Zwinglianism which is in the long run quite uneventful. Lobstein is quite right. Ramus's significance certainly does not lie in theology. This one and only theological work out of his sixty-odd separate productions was never printed by any other than the Wechel firm at Frankfort-on-the-Main. Its chief significance appears in Theophilus Banosius's preface, which dedicates the work to Sir Philip Sidney; and the significance consists in a curious deformation of theology. For, as Banosius proudly remarks, Ramus here attempts to reduce religion itself to an "art" like the arts of expression—grammar, rhetoric, and logic—an event truly momentous if we only examine the long-neglected history of arts scholasticism and its connection with the sixteenth-century passion for "method," or with Calvin's *Institution de la religion chrétienne* and its patently schoolroom-type title.

Waddington's work is more ambitious than Lobstein's, and the valuable mass of facts he assembles merits more competent exegesis than that which he provides. His resolution of the issues is almost exclusively personal and moral, often to a passionate and even neurotic degree. There are good people and bad people, and Ramus was one of the good ones. The real issues are hardly exposed, for Waddington gives no evidence of reading either the people Ramus reacted against, headed by Peter of Spain, Pierre Tartaret (Tartaretus or Tateretus), and the like, or Ramus's chief source after Cicero, Rudolph Agricola. Characteristically, Waddington can completely miss the significance of a sixteenth-century term such as *hypothesis,* while making a passionate issue of it.[3] It should be said in Waddington's favor, however, that Ramus is not in any sense simple to explain. As a paper on Ramism in the Netherlands[4] read at the recent International Congress of Philosophy at Brussels makes clear, Ramism is radically eclectic and often hard to distinguish from other movements, even those it professes to be against.

The most pretentious study of Ramism since Waddington and Lobstein is Frank Pierrepont Graves's *Peter Ramus and the Educational Reformation of the Sixteenth Century* (New York, 1912). This work is the best all-round brief of the positive content of Ramus's various works, and it will remain permanently useful. Unfortunately, the background in which it sets the works is, at best, sophomorically conceived, without any sense of the real movement of intellectual history and with a repetition, sometimes word-for-word, of Waddington's moral indignation as a substitute for historical perspective. Waddington had seen Ramus as a sixteenth-century Victor Cousin; Graves makes him a sixteenth-century John Dewey, forcing on the technical legal term *usuarius* the unheard-of meaning of "utilitarian" and even "pragmatist."[5] The 1922 thesis of M. Robert Barroux at the École Nationale des Chartes, "Pierre de la Ramée et son influence philosophique,"[6] is far more intelligently provocative in handling the context of Ramism, for it suggests the huge perspectives in which Ramus's "method" is set, perspectives which open into the very center of the intellectual heritage of Western man.

However, with the occasional articles, mostly German, which have appeared in the past century, all these studies by Waddington, Lobstein, Graves, and Barroux remain rather isolated from one another. Present-day interest in Ramism in the English-speaking world is a different kind of thing. It is rather communal; and it tends to regard Ramism not as a mere *cause célèbre* admitting of revival from time to time but rather as a phenomenon or symptom which, studied dispassionately, may yield helpful and perhaps even startling information concerning intellectual history and the formation of the modern mind. This present-day interest received its greatest stimulus when Professor Samuel Eliot Morison produced his *Harvard College in the Seventeenth Century* as a part of the Harvard tercentennial celebration in 1936, publishing at the end of the second volume lists of the theses defended at Harvard from 1643 to 1708. These theses are thoroughly Scholastic in any acceptable twentieth-century meaning of this term; but they are also, particularly in the earlier period, most decidedly

("Complément au Vol. XIII"). Another quite recent study of Ramus published in French is M.-M. Dassonville, "La genèse et les principes de la dialectique de Pierre de la Ramée," *Revue de l'Université d'Ottawa*, XXIII (1953), 322-59.

[5]Graves, *Peter Ramus*, p. 57.

[6]Pp. 13-20 in *Positions des thèses*, École Nationale des Chartes (Paris: Librairie Alphonse Picard, 1922).

Ramist. "Sola Dialectica Concrescit cum Seipsa et cum Omnibus Aliis Artibus," "Grammatica Est Perfecta sine Rhetorica Non Contra," "Linguae Sunt Artium Gratiâ," "Bene Metiri Est Cujusque Magnitudinis Proportionem et Affectionem Perspicere"—these titles we read among the theses for August 9, 1653. Earlier, in 1647, there was "Res Est in Loco, Tempus in Re"—a thesis which reveals the box-inside-of-box formulation typical of Ramist "analysis."

The weird sound of some of these assertions—"Rhetorica Est Affectuum Hortus," a 1653 thesis emended in 1691 to "Rhetorica Est Affectuum Syren," or "Dialectica Est Sol Microcosmi, Argumenta Sunt Logici Radii," or again "Methodus Intelligentiae Parens Est, Magistra Memoriae" (1653)—fell tantalizingly on ears in the English-speaking world trained by twentieth-century interest in metaphysical poetry to expect the unexpected in sixteenth- and seventeenth-century linguistic attitudes. They suggested that the interior of the early New England mind certainly did not correspond to the accepted description of this mind drafted by a chauvinistic nineteenth-century liberalism using the past as a mirror for itself. In 1939 Professor Perry Miller of Harvard produced a new description in his revolutionary work, *The New England Mind,* where, among other things, the Ramist tradition was given its full due and placed in the largest context it had ever been placed in: New England Augustinian piety, the Scholastic heritage, the New Englander's persuasions about the nature of man and his relation to God, the question of rhetoric and the plain style, and of God's covenant with New England. Three years before, the same year as Morison's work, Professor Hardin Craig of Stanford University had published *The Enchanted Glass: The Elizabethan Mind in Literature,* which provided a further discussion of Ramism in the cis-Atlantic English-speaking world, describing Ramus as "the greatest master of the short-cut the world has ever known." This work has been followed by others, which also depend on Miller's fuller treatment, such as Rosemund Tuve's *Elizabethan and Metaphysical Imagery* (Chicago: Univ. of Chicago Press, 1947), Sister Miriam Joseph's *Shakespeare's Use of the Arts of Language* (New York: Columbia Univ. Press, 1949), and T. W. Baldwin's two-volume *William Shakspere's Small Latine and Lesse Greeke* (Urbana: Univ. of Illinois Press, 1944), and several

other works with large sections on Ramism and its effect on the literary sensibility of the sixteenth and seventeenth centuries.

As a result of these and recent shorter studies,[7] interest in Ramus and Ramism is now at its maximum in the English-speaking world. This concentration of interest is perhaps as it should be, for, although as a movement Ramism had its greatest vogue in Germany (largely because its specious encyclopedism made it attractive to the often newly organized and somewhat starry-eyed German universities), it had its second greatest vogue in the English-speaking world, in the British Isles, the American colonies, and among the exiles in the Low Countries, where it had also an indigenous history, fed from both the German and the British sides.[8] After his death in 1572 in the massacre of St. Bartholomew's Day, Ramus ceased to have much direct importance in his own country. This fact was connected with religious differences; but it cannot at all be explained by them alone, for, although Ramus had become a Protestant toward the end of his life, Ramism, as has been indicated above, does not directly engage theology (its strong but subtle theological implications were never really adverted to by contemporaries and represent tendencies widespread among Catholics, too). The weakness of Ramism in France is connected with the fact, which the tabulation of the editions of the *Dialectic* and the *Rhetoric* will make clear, that when it later reached its full strength, Ramism did so as a dialectic more than as a rhetoric, whereas at the earlier period, when Ramus was accepted in France, he

[7]For example: Norman E. Nelson, *Peter Ramus and the Confusion of Logic, Rhetoric, and Poetry,* "The University of Michigan Contributions in Modern Philology," No. 2 (Ann Arbor: Univ. of Michigan Press, 1947), p. 22; Pierre Albert Duhamel, "The Logic and Rhetoric of Peter Ramus," *Modern Philology,* XLVI (1949), 163-71, and "Milton's Alleged Ramism," *Publications of the Modern Language Association of America,* LXVII (1952), 1035-53; J. Milton French, "Milton, Ramus, and Edward Phillips," *Modern Philology,* XLVII (1949), 82-87; Wilbur Samuel Howell, "Ramus and English Rhetoric: 1574-1681," *Quarterly Journal of Speech,* XXXVII (1951), 299-310; Walter J. Ong, "Hobbes and Talon's Ramist Rhetoric in English," *Transactions of the Cambridge [England] Bibliographical Society,* III (1951), 260-69; "Peter Ramus and the Naming of Methodism: Medieval Science through Ramist Homiletic," *Journal of the History of Ideas,* XIV (1953), 235-48; "Johannes Piscator: One Man or a Ramist Dichotomy?" *Harvard Library Bulletin,* VIII (1954), 151-62; and "Fouquelin's French Rhetoric and the Ramist Vernacular Tradition," *Studies in Philology,* LI (1954), 127-42.

[8]This currency of Ramism will be documented in the inventory mentioned in n. 1 above.

[9]See the exceedingly rich and valuable study by Richard McKeon, "Rhetoric in the Middle Ages," *Speculum,* XVII (1942), 1-32.

was accepted rather as a rhetorician—the greatest Latin orator since Cicero, thought his colleagues, who were possibly right. The reason for this state of affairs is fascinating but too complicated to be gone into here.

As scholars in the English-speaking world have suspected, the significance which Ramism has for our age can be largely described in terms of developments with the more or less complementary fields of dialectic and rhetoric. Medieval arts scholasticism—that is, Scholastic *philosophy*—in the large regarded dialectic, to which it commonly assimilated logic,[9] not as the art of thinking but, following the Ciceronian tradition, as the art of discourse (*ars disserendi*), with all the equivocation which this ample view implied. One could never be sure whether dialectic and/or logic governed only certain, formal, scientific reasoning, or whether it governed also, and in the same fashion, all the intellectual elements in all speech. In the *Summulae Logicales* of the thirteenth-century Peter of Spain—which, in its historical consequences, is probably the most important scholastic work of all times, since, directly or indirectly, it controlled arts scholasticism at Paris and through Northern Europe until Rudolph Agricola projected his topical logic toward the end of the sixteenth century—dialectic is *described* as an art having to do with probabilities; but it is *treated* as an art dealing with certainties like those in mathematics—except for the astounding fact that the topics (which had classically to do with probabilities) are thrown in without explanation for good measure. This picture is complicated by the connection of dialectic in practice with scholastic dispute and, even more importantly, with the pedagogical tradition of the northern universities, where dialectic or logic is likely to be viewed as the art of teaching rather than as the art of thinking.

As the art of discourse or speaking, or of teaching, dialectic or logic had a definite connection with the audile and with words as sounds, with the definite personalist and existentialist implications which attach to a world of voices. Ramus arrives on the scene at the time this dialectic is being "simplified" in an operation which is among the most complicated and critical and central in the whole history of the human mind and out of which grows preoccupation with method

and the whole modern mechanistic-minded world, for it must not be forgotten that, in theory and to a great extent in fact, dialectic or logic controlled all the other arts or sciences or curriculum subjects. This simplification of logic is connected with the humanists' determination to provide something adapted to the capacities of children, for humanism is pupil-centered, whereas the northern universities, essentially teachers' unions, were teacher-centered, tending to see their pupils not in terms of the pupils' capacities here and now, but as aspirant pedagogues. But the simplification is even more deeply related to a widespread and mysterious shift from the audile to the visile in the whole way of thinking about cognition and the nature of man. At the end of this shift, by the eighteenth century, God will become in the minds of many curiously mute, and by that fact depersonalized, a mere mechanic, a celestial architect, a mason, whose laws concern not the human consciousness but the ranging of objects in space. Man's notion of what he himself is will undergo a corresponding shift in emphasis.

The details of this shift from the audile to the visile cannot be described apart from a much fuller treatment of Ramism than is possible here, for they are extremely complicated and profound. But they are unmistakable. It is within this shift that Ramus turns up—an eloquent man, voluble and learned besides, but so innocent of genuine philosophical insight as to be an unwitting catch-all for the tendencies of the age which more discerning men often tried to resist or at least to understand and control. As one observes Ramism in its historical unfolding, beginning with Rudolph Agricola and his replacement of the old Scholastic logic or logistic with a logic of "places" (commonplaces or loci) even more mechanistic in implication, and developing through Ramus himself and into German philosophical "systems" conceived by analogy with Copernican space and into English "methodism,"[10] it becomes possible to assign what, I believe, is the central significance of Ramus and Ramism, at least for our own age.

Ramism is above all, although not exclusively, a manifestation of the subtle and apparently irresistible shift sacrificing auditorily

[10]See Walter J. Ong, "Peter Ramus and the Naming of Methodism," *Journal of the History of Ideas,* XIV (1953), 235-48.

[11]See the important work of Philotheus Boehner, O.F.M., *Medieval Logic* (Manchester, England: University Press; Chicago: Univ. of Chicago Press, 1952).

oriented concepts for visually oriented ones which sets in with medieval scholasticism and on which most of the characteristic manifestations of the modern as against the ancient world depend. This shift is intimately connected with the scholastic emphasis on a logic which, as against more purely Aristotelian logic, was a kind of logistic,[11] and on physics—a bad physics, but physics nevertheless, taught to millions of schoolboys from the thirteenth to the sixteenth century and later on a scale the ancient world had never even approximated. The shift is equally connected with the scholastic build-up of the teaching profession. It is connected with the invention of printing, with the emergence of book titles in their postincunabular form, with the development of a sense of format for communication encouraged by printing, with the humanists' attitude toward language—a thing controlled by the *written* word, the word committed to space, not by *living* speech—as well as with the belief that all revelation was contained in a book.

The shift manifests itself in Ramism particularly in Ramus's complete divorce between dialectic and rhetoric. For Ramus appears on the scene just when dialectic (or logic) was shifting from an art of discourse, as Cicero had had it and as Ramus's Latin definitions nominally have it, to an art of thinking or reasoning. As an art of discourse, dialectic had suggested an interplay of personalities, a give and take in an existentialist situation. As an art of thinking, it was carried on in the privacy of one's own head and in a fashion more and more diagrammatic, with greater and greater reliance on spatial analogies and a more or less overt desire to dispense with words as words, since these annoyingly hint that in some mysterious way thinking itself is always carried on in the presence—at least implicit—of another. The meaning of the well-known Ramist tables of dichotomies is to be sought here in the drift toward spatial analogies of any and all sorts. With dialectic separated from rhetoric as a kind of intellectual diagrammatics, rhetoric is left in absolute control of the world of sound as sound. But even here, the spatial imagination gains control, and rhetoric comes to be described as a kind of ornament conceivable in mechanico-spatial terms.

Such are the issues which Ramism involves and such the issues

within which the sixteenth-century and seventeenth-century madness about method swirls. The study of Ramism shows the utter fatuousness of considering Bacon or Descartes as the fountainheads of interest in method. They are not the start but the culmination. Ramus was older than Francis Bacon by two generations, and it is quite evident that in Ramus's day the question of method had been long at the boiling point. The method crisis had set in in the scholastic period. We sometimes forget that the only place in the entire history of human thought where our "modern methodology" (which culminates in the H-bomb) emerges is after the scholastic age, as we sometimes forget, too, that most scholasticism was not theology at all and most scholastics were not priests.

The study of Ramism makes it evident that to understand the history of method we have to abandon our own favorite lines of explanation and get back to the issues as they really existed. The basic issue was not the struggle between inductive and deductive method, for there never was any serious or concerted opposition to inductive method but, if anything, too much respect for it—philosophers commonly took it for granted that induction was essential groundwork and therefore that it was easy to do and needed no special attention. The basic issue was the struggle between sound and sight, between habits of thinking based on listening to voices and habits of thinking based on looking at surfaces, between living in a world inhabited by persons who talked back and living in a world occupied by passive objects scattered in "systems" through the new Copernican space. The real obstacle in the way of fuller inductive development was not deduction but the voice and person of the teacher,[12] who kept talking all through the scholastic centuries. But this same teacher proved all-important, nevertheless, in paving the way for a more inductive approach, since his incessant talking helped reduce the dialogue of dialectic to a monologue and thus was a preparation for the more complete elimination of personal

[12]The way in which teaching actually blocked observation in dissection as practiced in medical lectures has been shown by Herbert Butterfield, *The Origins of Modern Science* (London: G. Bell and Sons, 1950), pp. 32-33. This situation is symptomatic of the whole state of mind at the time.

[13]In the opening words of Peter of Spain's *Summulae Logicales*, dialectic was defined as "ars artium et scientia scientiarum"—where *ars*, and even *scientia*, is in effect a curriculum subject. Renaissance educators seldom reversed this ruling.

components in the scientific situation in favor of an "objective," apersonal approach.

The great crisis of the sixteenth century is set in these strange perspectives, and Ramus's famous anti-Aristotelian reform of logic lodges here, too. Ramus's attack on logic was an attack not on deduction—nobody ever deduced with the fanaticism of a Ramist—but on that bedrock of intellectual life, the curriculum. This is why the teachers' unions which we call universities reacted, for logic was not only the art of discourse but a fortiori the art of teaching, by which curriculum subjects were, at least nominally, organized.[13] Ramus's wild desire to attack the curriculum was accompanied by no remarkably discerning solutions of the difficulties, which were real, although his practical reforms in teaching methods, like those of many others in his age—Vives, Sturm, the Jesuits—were common-sense and in some measure effective. Ramus's overpowering drive, which he shared with many contemporaries, was a deep-seated, unconscious yearning for simplification, which expressed itself finally and characteristically within the Ramist economy in diagrams—there are whole folio volumes by Ramists in which every word and phrase is spitted on a dichotomized table, deployed in a spatial relation to the other words and phrases.

This drive toward the spatial, this reinforcement of the visile component of cognition, is a drive toward the construction of the observational, depersonalized collection of objects in terms of which we picture the world today, because it is a drive to think of things as surfaces, objects, rather than as symbols or as persons with voices. But the drive in Ramus's case is completely blind: he has no noteworthy expressed partiality for an observational approach at all. What he wants is "arts," something to know which is clear, distinct, set down once for all in a book, and, in the last analysis, picturable—the visile Ramus is the forerunner of the visile Descartes here. At this point, the way is prepared for "objectivity" by the death of the element of dialogue in dialectic. The two-part Socratic personal interchange is gone, and even the monologue of the teacher is gone—in other words, persons and voice are gone. An art is now a "thing," not a possession of the mind but something with surface, like the rest of the coming Newtonian world.

Chronicle

An International Congress of Philosophy in honor of Antonio Rosmini, on the occasion of the centenary of his death, will be held at Genoa, July 20 to 25, 1955. The secretary of the committee is Michele Frederico Scianna; other members of the committee include Chaix-Ruy, Dempf, Morando, Munoz-Alonso, Perticone, Ravà, and Spirito.

The Fourth International Thomistic Congress of Philosophy will be held in Rome, September 13 to 17, 1955, under the auspices of the Pontifical Roman Academy of St. Thomas Aquinas. The three related themes of the Congress will be the doctrine of St. Thomas compared with the present state of the sciences, with the Hegelian and Marxian dialectic, and with questions raised by existentialism. It is intended to have the papers published early in the summer.

The Catholic Renascence Society held its Spring Symposium in Milwaukee, April 11 and 12, 1955. Participants were F. X. Connolly, Hugh Dickinson, Caroline Gordon, James Hafley, Victor M. Hamm, Marshall McLuhan, Frank O'Malley, John Pick, Richard Sullivan, Allen Tate, Norman Weyand, S.J., John Walsh, S.J., Aubrey Williams, and William K. Wimsatt, Jr. The general theme was literary criticism today.

The Annual Aquinas Lecture, sponsored by the Aristotelian Society of Marquette University, was given on March 13, 1955, by Professor Charles J. O'Neil of Marquette University. His topic was "Imprudence in St. Thomas Aquinas."

Maurice Meigne, s.j.

COMPLEXITY OF MATHEMATICAL LOGIC

Translated by Venant Cauchy
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IV Logic, Mathematics, Positivism

Let us indicate some consequences of the difference of conception between pure logic and mathematics. The first conclusion is that the summary quantification of ordinary logic is unsuitable for mathematics. The extension of the different variables of an enunciation changes, in effect, with the theories and also within a theory if the axiomatic base is capable of freely re-enforcing itself by means of new axioms and new rules, as in the case of the great formal systems which we wish to constitute. There is no guarantee that the fields are fixed. The field of a variable contained in various propositions may change from one proposition to another. The expression "all x," for example, is indeterminate.

The notion of *equivalence* between the predicate and its class—or more generally that of a logical function having many variables and the field of systems of arguments for which it is satisfied—though acceptable in pure logic by virtue of its conventions, ceases to have a precise meaning. Necessarily, one must make use of a double notation which brings out at the same time the predicate (or the logical function) and the precise field of the variables in the theory. It becomes clear that the fundamental questions bearing on the formal systems of mathematics will be much more difficult than those dealing with the purely logical systems. We can only mention the existence of other conclusions relating to the excluded third.[18]

We note furthermore that the use of implication in mathematics is very different from its use in pure logic, owing to the fact that logical atomism is not retained any more. In ordinary logic, the generalized

(or formal) implication only corresponds to the coincidence of the logical values of two propositions—a ⊃ b merely signifies that the implication is false only when proposition *a* is true and *b* is false; it is true in all other cases. There is no real bond between the two propositions. The independence of the propositions could justify this view. But such is not the case in a mathematical theory where the propositions are intimately dependent on one another. The expression a ⊃ b must signify that if the proposition *a* is a theorem or an axiom of the theory, *b* is also a theorem; that is, there *exists a demonstration* in the theory which by means of *a* leads us to *b*. Gentzen's notation in this matter is more precise: we shall write a,b,c, . . ., l ⟶ b to indicate that proposition *b* can be demonstrated by means of the axioms or theorems a, b, c, . . . l.[14] However, in both instances the demonstration is not *represented* in any way but *postulated;* the notation does indicate at least the logical dependence between the conclusion and its premises.

The intrinsic dependence (already observed in mathematics) which obtains between "logic" and the "material" on which it works shows that it is superfluous and inadvisable to suppose an a-priori structure of the mind. The structures which the mind appears to impose a priori on the "many" are derived from those which it had obtained in the course of a prior activity in a framework of thought often quite limited. The idea of such a structure of the mind could be explained in a period which extends from antiquity to the second half of the nineteenth century, during which only one logic was known, that of a certain language, and likewise one geometry which sufficed for everything. In our times the excuse does not hold. A false—or at least very incomplete—solution is thus eliminated from the theories of knowledge. On the other hand, a formal structure may have a certain value of abstract representation in the mathematical and scientific theories. This is a possibility without being a necessity, but it does destroy a new absolute separation between the "empirical" and pure thought.

As an example, let us show the difference between our conceptions and those of Logical Positivism. The sharp distinction between the form and the matter of statements is found in the neo-Positivism of the

[13]In *The Existence of Formal Theories and the Foundation of Mathematics.*

[14]*Mathematische Zeitschrift,* XXXIX (1934), 184.

[16]Rudolph Carnap, *Logical Syntax of Language* (London: Kegan Paul, 1937).

Vienna Circle which pervades this movement. Neo-Positivism will be more easily understood if we set forth its fundamental theses. It brings together Russell's logico-mathematical ideal and the ideal of a purely empirical science, the former contributing the form and the latter the matter. The "antimetaphysical" attitude consists in attributing philosophical interest only to the questions dealing with the "logic of science." The objects of metaphysics are pseudo-concepts which generate pseudo-sentences and pseudo-problems. These products have no logical content but look to sentiment and volitional tendencies. The philosophy of the sciences is itself purified, by means of critical analysis, of all the vacuous sentences and questions. Those that remain can be translated into sentences of the logic of science.

Science is divided into formal science, also called pure syntax, and real sciences—physics, biology, psychology, sociology, history—written in a material language. Formal science comprises logic and mathematics, both formalized. It is constituted by the rules of formation (of construction) of sentences and by the rules of transformations (of deduction) of sentences. The languages treated by logic are formalized object-languages, on which the considerations of the syntactic language bear. Formal science comprises only tautological (Wittgenstein) or analytical (Carnap) propositions. Under different forms "they all say the same thing; that is, nothing." Pure syntax offers nothing more than an empty frame, but—no one knows why—it is ever ready to apply to the sciences, whatever may be its nature, by means of a "rule of application."

For Carnap[15] syntax is endowed with descriptive and synthetic sentences accompanied by their "rules of consequences" to constitute a descriptive syntax. The total language extends beyond that of mathematics because of synthetic sentences useful to translate physics. The sentences of the logic of science are stated as sentences of this logic, but they do not add any new domain of objects. Logical syntax replaces the metamathematics of Hilbert's school. The author shows how "a language may contain its own syntax without contradiction," an ambiguous expression which means that the total language, which does not have actual existence, is composed of an indefinite sequence of more and more fruitful languages so that each may serve as a

metalanguage for its predecessor. He thinks he has proved that the language of classical mathematics is noncontradictory.[16]

Finally, the philosophy retained is, in Carnap, nothing but the syntax of the language of pure and applied science. General syntax encompasses at once all logical questions and even the problems relating to the meaning, or content, of the synthetic sentences.[17] General philosophy, mathematical philosophy, and scientific philosophy are thus reduced to a single philosophy, expressible in a language, by means of the proper terms of the language; it is the philosophy of a discourse and of a formalized discourse. In brief, all the metalanguages are reduced to the language of science.

The reduction of all philosophy to logical syntax is accented by the thesis of physicalism, which limits still more the extent of language. The universal language of science is that of physics, so that every scientific language may always be translated into that of physics and keep the same meaning. Hence the "unity of science," according to which no domain of objects is essentially different from any other; in particular, there is no abyss separating the sciences of nature from psychology.

The opposition between the formal and the intuitive, which was already found in Hilbert's theory of demonstration, is increased. For Wittgenstein the rules of logical syntax must be formulated without reference to meaning or signification; Carnap is still more emphatic.[18] In brief, logic must be independent of empirical knowledge. The original opposition has shifted; it does not obtain between formal mathematics and intuitive mathematics any more but between experience and the logico-mathematical language. A strict separation (at least *de jure*) is established between the concrete empirical sentences provided directly by experience and the sentences of logic. Only the former have a content (Wittgenstein). Carnap tolerates bringing into syntax the synthetic sentences endowed with meaning. The rigid opposition between the pure and the empirical is retained in principle. There remains an absolute separation between the form of a logico-mathematical sentence and the content of an empirical sentence. The break results in the suppression of real objects in the sentences of the language. Reasoning will bear on position-objects and not on real

[16] *Ibid.*, p. 124.
[17] *Ibid.*, p. 223.
[18] *Ibid.*, p. 284.
[19] *Ibid.*, I, chap. 3.

objects any more; hence the use of the language of co-ordinates. The opposition in Russell and Hilbert between the logical and the empirical is strengthened; all existential presupposition is banned from logic. The relations bear only on positions and not on the presence or absence of an object at these positions.

By this exclusion, the neo-Positivist philosophy would seem to take an idealist or phenomenalist turn if a latent realism of the syntax did not otherwise insure all the necessary conformity with experience.[19] This philosophy will never have anything to say concerning what transcends experience—experience being confused with the purely empirical, the object of immediate observation recorded in the account ("procès-verbal," "Protokoll") of experience.

The "antimetaphysical" thesis is based on the existence of pseudo-problems. We readily admit that metaphysics is easily productive of false concepts, false principles, and false problems. This does not prove, however, that true problems, though incorrectly grasped and still more incorrectly expressed, are not concealed under the false problems or under badly stated questions. The problem of the universals, conceived in a spirit of Platonism, can be considered historically as a false problem; nevertheless, it hides the true problem of the value of conceptual knowledge and hence of ordinary science and philosophy. The false concept of the unknowable *en-soi,* unrelated to experience, conceals the true question of the existence of units and of unity in the world. The false solutions ought not dissuade us from searching for the true problems, hidden perhaps under unsuitable or ill-adapted languages. We are of the opinion that in general philosophy, as well as in mathematics and the sciences, it is practically impossible to state a problem correctly unless one has sufficient means of solution. We have seen this in the case of mathematics.

Moreover, metaphysics does not hold a monopoly on false concepts and false problems. Many mathematicians believe that the transfinite numbers of the sets whose power is superior to that of the denumerable set, or at least to the power of the continuum, are false concepts. In the sciences, we know that nature refrains from answering—or sometimes answers beside the point—questions which are irrelevant or wrongly stated. The ether of the wave theories is thought to be a

false concept in our times. Even in logic we were forced to withhold actually the name of true theories from most of the formal systems and symbolic languages, with the exception of a few simple logics and of finite axiomatic arithmetic. These observations incline us to modesty in all the branches of intellectual activity extending from "physics" to metaphysics.

The antimetaphysical attitude is joined to the principle of the relativity of every object of thought and of every reality to a language, whereas we have presented the opposite, thereby opening up a greater area of investigation. The thesis of physicalism, which again reduces the remaining area, can only be looked upon as a working hypothesis without the capacity to limit the field of inquiries or to forbid other hypotheses. The formalization of language, when it is not a simple algebraization, opposes to logical syntax the objections and difficulties pointed out for the formal systems.[20] The reduction of mathematical logic to a formalized logic overlooks the highest forms of logic. And in the formalized languages the assimilation of mathematical logic to ordinary logic and its procedures leaves the conclusions bearing on the foundation of the languages in a very precarious condition.

The restatement of the Kantian thesis of the absolute opposition between the logical and the empirical, though questionable in itself,[21] also encounters difficulties on the scientific level. The thesis does not take account of the metaempirical character of scientific experience. Just as there is for us no pure logical thought, so there is no pure empirical in the domain of science and probably of all experience. The results of experience, which the scientists can define and use, result from a complex elaboration which depends simultaneously on the experimental environment, the techniques of observation and measurement, and the treatment of numerical readings, if there are any.

The experimental environment is a reality in which one recognizes or assumes that properties exist. It contains elements, which are not pure phenomena, endowed with properties previously obtained and which are now attributed to them—the surrounding air, a certain void, solids and liquids arranged according to a pre-established plan. They are laden with properties which are not perceived but attributed ac-

[20]See above, Part III of this paper.

[21]See above, beginning of Part IV of this paper.

cording to the laws of interpolation or extrapolation of properties already constructed. The various instruments and devices which constitute the material of experience are the object of more or less advanced theories that make use of a part of established physical science. Thus the experimental milieu, in which the new fact is studied, is laden with thought, concepts, propositions of variable generality, theories, and logic. A reading on a dial, a measurement on a photographic plate, do not by themselves have any signification or scientific value if one separates them from their experimental milieu and consequently from the theories and laws, constituted or assumed, which give the milieu its structure. The purely empirical, the pure phenomenon, the mere observation isolated from its environment, cannot be used.

Observation is often accomplished according to a certain technique which is acquired over a long period of time. An observation and measurements, to be well done, require hours, sometimes weeks of preparation for setting up, adjusting the instruments, and for preliminary trials. There exists in the experiments an active reflection and an at least incipient theory of satisfactory observation and correct measurement.

Finally the results of experience are not the direct observations which are noted on the experiment record. The raw account of the experiment will undergo a series of transformations whereby it will be translated into results. First we have the corrections of readings or of observations in order to compensate for the defects of the apparatus (calibration) or for the very conditions of the experiment (refraction of the atmosphere in astronomy) and the determination of the "errors" of measurement. Then the methods of averages and calculation of errors lead to the "most probable values" as well as to the "upper limits of the errors." These limits will inform us on the degree of approximation of the results. In geodesy and in astronomy of position, for example, the measurement of a length, of an angle, or of a time require a great many readings—the same magnitude is measured many times under different conditions—and complex and difficult computations. In the end the results retained are always different

from the direct measurements; the results of mensuration go far beyond the empirical observations.

The established results can be directly utilized in the form of tables; often one constructs a curve or a function which "passes through all the results." This procedure is based on a theory of the utilization of the experimental data in a method of interpolation. The curves and functions may conceivably not pass through any point resultant. At any rate, the results, recorded in tables or introduced into curves or functions, can be utilized only if one accepts a rule of interpolation.

The consequence of this threefold intervention of thought and of its logic in the experiment—in the composition and definition of the milieu, in the operative technique, and in the treatment of the direct readings—is that one may hold the notions of pure phenomenon and pure empirical to be false concepts in science. Starting with its first results, experimental knowledge is a partly rationalized knowledge. The theories which are exclusively idealist or phenomenalist have no scientific basis.

Let us note the insufficiency of a "rule of application," supplying the interpretation of the symbols, to justify the application of a construction of syntax to experience. There should logically exist within the interval of permissible approximations, over and above the interpretation of the symbols, a sort of isomorphism between the relations and structures of the syntax and the real (or supposed) relations and structures of reality.[22] The latter constitute precisely the object of a natural physical theory adapted to its object. It is therefore necessary to make use of a natural theory. This Carnap accomplishes in part when he introduces synthetic sentences into syntax.

Confronted with the inadequacy of the other solutions, we must accept a certain knowledge of reality represented by abstract structures to the extent that they are confirmed by experience. The scientific theories may have some value of representation and explanation—at least *in globo*; it is not necessary to revert to the naïve view of ancient realism, which was too prone to realize all concepts and even the processes of thought and of discourse and to make its creations into exact definitive and absolute cognitions. This naïveté is also shared by some idealisms and positivisms. The necessary and absolute application of logico-mathematical conceptions to the exterior world,

[22]See above, Part I of this paper.

presented under the name of empirical realism in Kant's idealism as well as in Logical Positivism, falls into what we have called the illusion of the formal, which conceals an absolute logical realism.

To sum up, our scientific knowledge translated into tables, laws, and theories is essentially a knowledge approached simultaneously from the angles of quality and quantity. The exact sciences are encountered only in mathematics. The laws and theories do not have a priori an unconditional necessity in their forms and structures. Application to reality is the sole guarantee of a logical necessity and of the generality of the laws in the framework of the physical theory. The postulate of the application to the real of a law or theory always takes a hypothetical form: "If reality is constituted in the manner predicted by the law or the theory, it will behave according to the law or theory." This postulate makes the logical workings of physical thought real when all the factors of the real are represented. In fact, we never know all the elements and factors of natural facts, and for this reason our laws are only probable even when we accept the preceding postulate of a conditional logical realism. Finally, the scientific and philosophic problems arising from the absolute separation of the empirical and the logical, of intuition and pure (or conceptual) thought, are false problems. The true questions, if we intend to give them a logical, mathematical, and experimental basis, must be set forth in a quite different perspective.

Joseph Owens, C.SS.R.

THE CAUSAL PROPOSITION—PRINCIPLE OR CONCLUSION?

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IX The "Accidental" Character of the Act of Being

There is a point that is of prime interest to the cogency of the proof that "everything which is not being (*esse*) only, has a cause of its being (*esse*)" or "everything whose being (*esse*) is other than its nature has being (*esse*) from another." There are two characteristics to an accident, *esse per* and *esse in*.[71] In showing that to be is accidental to a thing's nature, the argument established first the *esse ab* or *esse per*[72] and then from that *esse ab* concluded to the *esse in*. This procedure indicates something different from the ordinary type of accident, the predicamental type, which is a form that denotes aptitudinal inherence as its primary characteristic[73] and in which, accordingly, the *esse in* is what appears directly in its nature, while the *esse per* is only a subsequent consideration.

What is precisely the nature of an accident for which the *esse ab* or *esse per* is a prior consideration to the *esse in*?

The reasoning of St. Thomas, when closely examined, should reveal the answers to these questions. The first point established is that where to be is different from the nature of a thing, it cannot be caused by the principles of that nature, as risibility is caused by the principles of the nature of man.[74] This would be a formal sequence, in which the causality, unlike efficient causality, is self-evident once the form and its effect are clearly known. The reason why the being (*esse*) of a thing cannot be caused through this type of sequence is expressed by St. Thomas in two ways.

The first way is that the thing would be the efficient cause of itself. If the principles of the nature could cause the being of the thing, the thing would be causing its own self. To be, therefore, is for a thing prior[75] in this respect to the thing's very nature, since to cause it to be is to cause the thing itself. Yet that "to be" is accidental to the thing.

[71]". . . subjectum enim dat esse accidenti, scilicet existendi, quia accidens non habet esse nisi per subjectum; unde dicitur quod accidentia sunt in subjecto, non autem dicitur quod forma substantialis sit in subjecto" (*De Prin. Nat.*, init.; ed. Perrier, No. 1). ". . . in ipsa ratione *entis*, substantia, quae est ens per se, prioritatem habet respectu accidentis, quod est ens per aliud et in alio" (*In I Periherm.*, lect. 8; Leonine, No. 6).

[72]*Ab alio* is understood as meaning *per aliud* in the present passage of *De Ente et Essentia*. "Ergo oportet quod . . . habeat esse ab alio. Et quia omne quod est per aliud . . ." (*De Ente*, cap. 4; p. 35, ll. 10-12). Cf. "Esse creatum non est per aliquid aliud, si ly 'per' dicat causam formalem intrinsicam; immo ipso formaliter est creatura; si autem dicat causam formalem extra rem, vel causam effectivam, sic est per divinum esse et non per se" (*In I Sent.*, d.8, q.1, a.2 ad 2). The *ab alio*, referring precisely to efficient causality, is always a *per aliud*, though the converse does not hold: ". . . istae praepositiones, 'a' et 'per,' in hoc differunt; quia 'a' designat tantum habitudinem principii per modum efficientis; sed 'per' designat habitudinem principii secundum quodlibet genus causae; unde omne illud quod est ab aliquo, est per illud: sed non convertitur" (*ibid.*, d.32, q.2, a.2, solut. 1). Geiger writes: "La notion de *ab alio* devient ainsi synonyme de *per aliud* ou de *per accidens*. Elle peut servir de moyen terme pour passer de la composition à la liaison accidentale et de là à la dépendence par rapport à une cause extrinsèque" (*La Participation*, p. 468). Geiger, in his vocabulary of participation, suggests that the term *ab alio* reflects the Platonic influences in St. Thomas: "En somme, ce terme semble refléter la conception *platonicienne* de la causalité, c'est-à-dire l'action d'un principe formel sur un sujet qui lui est étranger" (*ibid.*).

[73]"Accidentia enim entia dicuntur, non quia in seipsis esse habeant, sed quia esse eorum est in hoc quod insunt substantiae" (*De Sub. Sep.*, cap. 6; ed. Perrier, No. 42). ". . . non possunt diffiniri nisi ponatur subiectum in eorum diffinitione . . ." (*De Ente*, cap. 6; p. 43, ll. 2-3). Cf. ". . . quidditati autem, sive essentiae accidentis competit habere *esse* in subjecto" (*ST*, III, q.77, a.1 ad 2) and ". . . definitio accidentis quae est aptitudo ad subjectum . . . , non actualis inhaerentia . . ." (*ibid.*).

[74]*De Ente*, cap. 4; p. 35, ll. 3-4 (text *supra*, n. 67). In the context of the *De Ente et Essentia*, risibility is understood as an accident, in the sense of a proper passion; cf. *ibid.*, p. 45, ll. 24-29. St. Thomas repeatedly states that such accidents are *caused* by the principles of the substance; for instance, ". . . invenitur enim aliquod ens accidentale causatum ex principiis sui subjecti . . ." (*CG*, I, cap. 22; ed. Leonine, XIII, 68b17-19). ". . . accidens naturale causatur ex principiis subjecti . . ." (*De Malo*, IV, a.2 ad 9). This type of causality, however, is sharply distinguished from efficient causality in *De Ente et Essentia*, cap. 4; p. 35, ll. 7-8 (text *supra*, n. 67). By a similar formal sequence, the premises in a syllogism are the cause of the conclusion. "Alius discursus est secundum causalitatem: sicut cum per principia pervenimus in cognitionem conclusionum" (*ST*, I, q.14, a.7).

[75]Cf. "Primus autem effectus est ipsum esse, quod omnibus aliis effectibus praesupponitur et ipsum non praesupponit aliquem alium effectum" (*De Pot.*, q.3, a.4). So is interpreted the "prima rerum creatarum est esse" in *In Lib. de Causis*, lect. IV, init. Elsewhere St. Thomas expresses this priority by saying that to be (*esse*) is most *formal* in regard to all the constituents of the thing. "Illud autem quod est maxime formale omnium, est ipsum esse" (*ST*, I,

It is not contained in the essence; it is an *adveniens extra,* an accident. Now, however, this accident reveals itself as in some way prior to the thing of which it is the accident. But it is prior in a way which does not make it subsistent and the essence of the thing its accident. It itself remains the accident.[76] Yet how can it in any way come under the

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q.7, a.1). "Esse autem est illud quod est magis intimum cuilibet et quod profundius omnibus inest, cum sit formale respectu omnium quae in re sunt" (*ibid.,* q.8, a.1). Cf. ". . . esse est illud quod immediatius et intime convenit rebus" (*De An.,* a.9, init.). Nevertheless, to be (*esse*) is definitely not a form. "Non enim est esse rei neque forma ejus neque materia ipsius, sed aliquid adveniens rei per formam" (*De Sub. Sep.,* cap. 6; ed. Perrier, No. 45; cf. No. 44). St. Thomas, in fact, changes the Boethian terminology from "form of being" to "act of being"; ". . . 'sed id quod est, accepta essendi forma,' scilicet suscipiendo ipsum actum essendi" (*In de Hebd.,* cap. 2; ed. Mandonnet, *Opuscula,* I, 172).

The term "formal" in this sense, accordingly, expresses the priority which the Aristotelian act has over its corresponding potency and is applied to the priority which the Thomistic *esse* has over the quiddity of the thing. To produce the *esse* is to produce the quiddity; cf. ". . . ex hoc ipso, quod quidditati esse attribuitur, non solum esse sed ipsa quidditas creari dicitur; quia antequam esse habeat, nihil est, nisi forte in intellectu creantis, ubi non est creatura, sed creatrix essentia" (*De Pot.,* q.3, a.5 ad 2). ". . . Deus, simul dans esse, producit id quod esse recipit" (*ibid.,* a.1 ad 17). Gilson writes: "Chaque essence est posée par un acte d'exister qu'elle n'est pas et qui l'inclut comme son autodétermination (*Le thomisme* [5e ed. Paris: Vrin, 1947], p. 54). The individual in actual reality, accordingly, depends upon and is in this way subsequent to its being. ". . . where there is no *esse* there is no Socrates" (Gilson, *Being and Some Philosophers* [2 ed. Toronto: Pontifical Institute of Mediaeval Studies, 1952], p. 225).

In St. Thomas efficient causality is strictly related to *esse.* "Unicuique autem competit habere causam agentem, secundum quod habet esse" (*ST,* I, q.44, a.1 ad 3). In Aristotle it had been related strictly to motion.

[76]". . . esse creatum, quod non est per se stans, quia est aliud a substantia entis creati" (*Quodl.,* X, a.4 ad 4). "Unde, cum omne quod est praeter essentiam rei, dicatur accidens, esse quod pertinet ad quaestionem *an est,* est accidens; et ideo Commentator dicit in 5 *Metaph.,* quod ista propositio, *Socrates est,* est de accidentali praedicato, secundum quod importat entitatem rei, vel veritatem propositionis" (*ibid.,* II, a.3). Such was the force of *praeter essentiam* in the text from *ST,* I, q.3, a.4, quoted *supra,* n.57, and in *CG,* cap. 22 (ed. Leonine, XIII, 68a51).

St. Thomas at times says that *esse* is not an accident, meaning accident in the Aristotelian sense of the categories other than substance. But in the wider sense of the term, as in the above texts—namely, in the sense of anything pertaining to the thing but which is outside its essence—he is constant in his assertion that *esse* in creatures is an accident. "Accidens dicitur large omne quod non est pars essentiae; et sic est esse in rebus creatis" (*Quodl.,* XII, a.5). ". . . esse est accidens, non quasi per accidens se habens, sed quasi actualitas cujuslibet substantiae" (*ibid.,* II, a.3 ad 2). He speaks of it as "adhering" and "inhering." "Sic ergo in angelis est compositio ex essentia et esse, non tamen est compositio sicut ex partibus substantiae, sed sicut ex substantia et eo quod adhaeret substantiae" (*Quodl.,* II, a.3). "Intellectus autem noster hoc modo intelligit esse quo modo invenitur in rebus inferioribus a quibus scientiam capit, in quibus esse non est subsistens sed in-

Aristotelian notion of "accident"? It is prior to the substance. Such an accident is clearly not an accidental *form*. If it were a form which determined the essence in an accidental way, it would be subsequent to the essence.[77] Since it precedes that essence, it cannot be a form at all; for the essential form is the primary form in the thing. As prior

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haerens" (*De Pot.*, q.7, a.2 ad 7).

Actually, St. Thomas is dealing with an act which will not fit into the Aristotelian classifications of substance and accident. The act is not substantial in the Aristotelian sense because it is not subsistent but inhering; neither is it accidental in the meaning of the Stagirite because it is prior to substance. It is, accordingly, prior to both substance and accidents. Yet it is substantial insofar as it is constitutive of substance; and it is an accident insofar as it is accidental to that substance in the sense of being outside the essence. On the first appearance of this notion of *esse* as "better than" both substance and accident in William of Auvergne, cf. E. Gilson, "La notion d'existence chez Guillaume d'Auvergne," *Archives d'histoire doctrinale et littéraire du moyen âge*, XXI (1946), 62-64: "On y voit en effet Guillaume mettre en évidence la motion d'esse, prise en son sens existentiel; la détacher d'abord des notions de substance, à laquelle elle était liée chez Aristote, et de celle d'accident, à laquelle elle était liée chez Avicenne: affirmer enfin le primat de l'exister sur l'accident et même sur la substance" (p. 64).

[77]"Sed illud cui advenit accidens est ens in se completum subsistens in suo esse; quod quidem esse naturaliter precedit accidens quod supervenit" (*De Ente*, cap. 6; p. 43, ll. 23-25). These accidents are designated as "forms" (*ibid.*, ll. 12 and 15). To consider being (*esse*) as a *form* prior to the essence would of course make the *esse* subsistent and the essence its accident. Speaking of subsistent *esse*, St. Thomas states, "Si autem secundo modo, oportet quod vel esse huiusmodi dependeat ab essentia; vel utrumque ab alia causa; vel essentia ab esse. . . . Ex tertio vero sequitur quod illa quidditas accidentaliter adveniat" (*CG*, I, cap. 22; ed. Leonine, XIII, 68a13-20).

[78]Cf. ". . . si ergo aliquid sibi esset causa essendi, intelligeretur esse antequam haberet esse, quod est impossibile:—nisi intelligatur quod aliquid sit sibi causa essendi secundum esse accidentale, quod est esse secundum quid. Hoc enim non est impossibile: invenitur enim aliquod ens accidentale causatum ex principiis sui subiecti, ante quod esse intelligitur esse substantiale subiecti. Nunc autem non loquimur de esse accidentali, sed de substantiali" (*ibid.*, 68b12-21). "Omne illud quod quandoque est et quandoque non est, est per aliquam causam: nihil enim seipsum de non esse in esse adducit, quia quod nondum est, non agit" (*CG*, I, cap. 99; ed. Leonine, XIII, 264a9-12). This latter text shows how the argument from the contingence of sensible things can fit into the demonstration as a whole; it serves as an illustration in excluding the possibility of a sensible thing causing itself.

[79]". . . essentia autem est secundum illud esse" (*ibid.*, cap. 22; ed. Leonine, XIII, 68b8-9). ". . . nulla forma est nisi per esse" (*Quodl.*, XII, a.5). The form, of course, *determines* the *esse* (". . . quaelibet forma est determinativa ipsius esse" [*In de Hebd.*, cap. 2; ed. Mandonnet, *Opuscula*, I, 176]) and in this way exercises its own type of causality in regard to the *esse*. Cf. ". . . quamuis huius esse suo modo forma sit causa" (*De Ente*, cap. 2; p. 10, l. 7). "Sed cujuslibet compositi esse dependet ex componentibus, quibus remotis, et esse compositi tollitur et secundum rem et secundum intellectum" (*In I Sent.*, d.8, q.4, a.1, 2 contr.). "Et hoc quidem esse in re est, et est actus entis resultans ex principiis rei, sicut lucere est actus lucentis" (*In III Sent.*, d.6, q.2, a.2, resp.). ". . . ipsum esse rei, quod quidem resultat ex aggregatione principiorum rei in compositis" (*In de Trin.*, q.5, a.3; ed. Wyser, p. 38, ll. 11-12). "Esse naturale per creationem Deus facit in nobis, nulla

to the nature, it cannot be caused by the principles of that nature.

The second way in which this reasoning is expressed by St. Thomas is that the thing would be producing itself in being (*esse*). "Producing" is an accident, which presupposes substantial being. The being which allegedly is being caused is already presupposed.[78] Again, "to be" is given a priority over the nature, for in producing its own being (*esse*) the nature would be producing itself.

Hence follows the conclusion that "to be" for a thing must come *from something else*, if to be is for it other than its nature. Why? This is the crucial point as regards the causal proposition, for it carries the reasoning outside the thing itself and introduces the necessary dependence of such a thing upon *another* for its very being. The text on first reading seems content with a mere illustration, "as light in the air from the influx of the sun." But the sequence of the thought contains the metaphysical reason. To be is for the thing other than the thing's nature; it is an *adveniens extra*, an accident. Yet it is not an accidental form; it does not present itself immediately as an *esse in*. How, then, can it be an accident? It has to depend upon something absolutely prior to itself, else it would be subsistent and no longer an accident. That something on which it depends, primarily at least, is not the nature of which it is the *esse*, for it is prior in the order of being to that nature.[79] The substance on which it primarily depends is therefore a

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causa agente mediante, sed tamen mediante aliqua causa formali; forma enim naturalis principium est *esse* naturalis" (*De Ver.*, q.27, a.1 ad 3). ". . . Deus esse naturale creavit sine medio efficiente, non tamen sine medio formali. Nam unicuique dedit formam per quam esset" (*De Car.*, a.1 ad 13). "Esse enim rei quamvis sit aliud ab ejus essentia, non tamen est intelligendum quod sit aliquod superadditum ad modum accidentis, sed quasi constituitur per principia essentiae" (*In IV Metaph.*, lect. 2, [Cathala No. 558]). But this determination, contrary to Aristotelian notions, remains a determination of act by *potency* and so leaves untouched the fundamental priority of the act over that potency. "Nihil autem potest addi ad esse quod sit extraneum ab ipso, cum ab eo nihil sit extraneum nisi non ens, quod non potest esse nec forma nec materia. Unde non sic determinatur *esse* per aliud sicut potentia per actum, sed magis sicut actus per potentiam" (*De Pot.*, q.7, a.2 ad 9). Cf. "Alia autem entia dicuntur per posterius, inquantum aliquod esse participant quod non est idem quod ipsa sunt: et haec procedunt usque ad ultima entium: ita quod quamcumque rationem essendi aliquid habeat, non sit sibi nisi a Deo, sed defectus essendi sit ei a seipso" (*In II Sent.*, d.37, q.1, a.2, solut.). Gilson comments: "L'acte d'exister se spécifie donc par ce qui lui manque, si bien qu'ici c'est la puissance qui détermine l'acte, en ce sens du moins que son degré propre de potentialité est inscrit dans chaque acte fini d'exister" (*Le thomisme*

substance other than the nature to which it gives being. It depends on a substance of which it is not the *esse*. It depends upon *another*, and so is *ab alio*[80] and in this sense *per aliud*. That is the only way in which the accidental character of the thing's being appears at this stage of the reasoning. It does not yet present itself as *in alio*. But once

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[5 ed., 1947] p. 54). Accordingly, "the basic principle of the existentialism of St. Thomas is that the act of existence enjoys an absolute metaphysical priority over essence" (J. F. Anderson, *The Cause of Being* [St. Louis: Herder, 1952], p. 140).

[80]". . . quod enim habet esse dependens ab alio, habet esse ab alio" (*In I Sent.*, d.8, q.4, a.1, 2 contr.).

[81]"C'est la notion *d'accident*, entendue en son sens le plus général de *ce qui n'est pas totalement indentique à un sujet donné*, qui sert comme de moyen terme entre la participation interne et al participation externe" (Geiger, *La participation*, p. 179). "Ces mêmes considérations permettent de comprendre la dernière caractéristique, la dernière anomalie, si on veut, de notre raisonnement, à savoir ce fait qu'il s'appuie sur ce qui est *accidentel* ou *per alterum* non seulement pour inférer l'existence d'une cause extérieure au sujet envisagé, mais encore une cause qui soit par essence cela même que l'expérience nous presente à l'état participé" (*ibid.*, pp. 187-88). Also: "De la *similitude* on conclut donc à l'existence d'une *cause* d'ou procède l'élément qui fonde la similitude, en passant par la notion *d'accident*, telle que nous l'avons définie plus haut" (*ibid.*, p. 194). Geiger considers that his procedure comes from the *Platonic* sources of the Thomistic participation doctrine: "L'accident, ainsi défini, devient synonyme de *mode d'être participé* ou *reçu*, non pas, encore une fois, au titre de realité fondée dans l'être sur une substance en qui elle inhère, mais dans le sens d'un rayonnement émané d'une source ou il préexiste à l'état pur et subsistant" (*ibid.*, p. 190). Cf. *supra*, n. 72.

[82]*In I Sent.*, d.8, q.4, a.2. Cf. *ibid.*, q.5, a.1, solut.; *In II Sent.*, d.1, q.1, a.1, solut., and d.3, q.1, a.1, solut. The conclusion that God is not in a genus is likewise drawn from the same argument in the *De Ente*, cap. 5; p. 37, ll. 16-21. Geiger (*La participation*, p. 475) notes that a résumé of "la démonstration de la valeur absolue du principe de causalité" is to be found in the following text from the argument in the commentary on the *Sentences:* "In Deo autem esse suum est quidditas sua: aliter enim accideret quidditati, et ita esset sibi acquisitum ab alio, et non haberet esse per essentiam suam" (*In I Sent.*, d.8, q.4, a.2).

[83]*ST*, I, q.2, a.3 (*secunda via*). *CG*, I, cap. 13; ed. Leonine, XIII, 33b34-48. Cf. texts cited *supra*, n.57. Similarly, the notions of "received" and "limited" *follow* upon the efficient causality already established. ". . . in quibus eciam esse est receptum et finitum propter hoc quod ab alio esse habent" (*De Ente*, cap. 5; p. 42, ll. 7-9).

[84]St. Thomas has to speak, somewhat hesitatingly, of being (*esse*) as though it were a "nature" which is participated. "Sed sicut hic homo participat humanam naturam, ita quodcumque ens creatum participat, ut ita dixerim, naturam essendi: quia solus Deus est suum esse" (*ST*, I, q.45, a.5 ad 1). "Cum autem Deus sit ipsum esse subsistens, manifestum est quod natura essendi convenit Deo infinite absque omni limitatione et contractione; unde ejus virtus activa se extendit infinite ad totum ens, et ad omne id quod potest habere rationem entis" (*Quodl.*, III, a.1). "Natura essendi" is here applied to God, but is changed to "rationem entis" for creatures. Yet in the commentary on the *Sentences*, "natura entitatis" is applied to creatures to denote their act of being. "Invenitur enim in omnibus rebus natura entitatis, in quibusdam magis nobilis et in quibusdam minus; ita tamen quod ipsarum rerum naturae non sunt hoc ipsum esse quod habent: alias esse esset de intellectu cujuslibet quidditatis" (*In II Sent.*, d.1, q.1, a.1, solut.). ". . . cum natura en-

it is shown to be received in a potency, it emerges as the act of that potency and so as *in* the nature. The *esse in* is in this kind of accident a subsequent consideration.

It is therefore from the "accidental"[81] character of a thing's being that the causal proposition is established by St. Thomas in the *De Ente et Essentia* as well as in the *Summa Theologiae* and the *Contra Gentiles*. The same procedure is indicated in the commentary on the *Sentences*[82] in the course of proving that God is not in a genus.

The principle of participation, then, does not enter into the process by which St. Thomas demonstrates the causal proposition. The doctrine of participation, in fact, can be established only after God has been shown to be the first cause and therefore essentially being. But God is proved to be the first cause on the ground that the things in the sensible world are caused by another.[83] Only after this proof may one consider being as a *nature*[84] which is participated by all other things. But one is thereby taking the Platonic language which originates in the domain of formal causality and is using it to describe a fact that pertains to a different order of causation. The participation of being then means the giving and receiving of being by way of efficient causality.

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titatis sit unius rationis in omnibus secundum analogiam . . ." (*ibid.*).

But since that "nature" is not participated as a form, it is not open to any pantheistic interpretation. Cf. "Si au contraire, en même temps qu'à l'*analogie*, on s'attache à l'*immanence* réelle de l'être en tout ce qui est, on est amené à constater, entre les êtres, une parenté qui ne peut plus s'expliquer par la communion à une forme générale, fût-elle analogique" (Geiger, *La Participation*, p. 371).

A nature that is participated as a form need not be caused efficiently by that nature as subsistent; whiteness in things does not require that subsistent whiteness be its efficient cause. The only dependence immediately indicated is the dependence on the subject in which it inheres, together with its order as a particular instance of the universal notion to which it gives rise. In the case of being (*esse*), which is an accident that is prior to the form, the dependence primarily indicated is the dependence upon another and ultimately on subsistent being. The only sphere, accordingly, in which the participation principle—what is first in any genus is the cause of the instances that are subsequent—holds in the sense that the "first" subsists in itself and produces the other instances, is the sphere of being and its transcendental properties; and here it is the efficient causality that establishes the participation, not vice versa.

[85]". . . sed habitudo causati ad causam non videtur esse de ratione entium; quia sine hac possunt aliqua entia intelligi" (*ST*, I, q.44, a.1, arg. 1). Cf. "Ex principiis autem communibus entis in quantum est ens, non intelligitur causari aliquod particulariter ens sufficienter" (*In IV Metaphys.*, lect. 2 [Cathala No. 559]). Nothing, that is, about a particular division

How, then, can St. Thomas say that "caused" follows from the notion of participated being, just as risibility follows from man?

St. Thomas makes this assertion in answering an introductory *argumentum*. He faces the consideration that "caused" is not contained in the notion of being; therefore, some beings need not be caused.[85] In the body of the article, he had shown that every being except God was a being by participation. Naturally, he answers the *argumentum* on the basis of the conclusion established in the body of the article. He replies, accordingly, that although "caused" is not contained in the definition of the being which is caused, still it follows from the consideration that the thing is being by participation. This doctrine had been the conclusion of the article. Hence, St. Thomas states in the answer to the *argumentum* that a thing which is not God cannot be without being caused by another, just as one cannot be a man without being risible.

This reasoning, *granted the premises*, is logical enough. Though the definition of any caused thing abstracts from being (*esse*), it does not prescind from it. Though to be is not included in its nature, the thing as a matter of fact has being; and so the *notion* of the thing as participated being—a notion established in the article—requires that it be caused. This is formal sequence—just as risibility follows necessarily from humanity, so does "caused" follow necessarily from participated being. Even though to be does not follow from the nature as risibility from man, still the notion "caused" follows from the notion of participated being as a necessary sequence. "Participated being"

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of being can be gathered from the principles of being as such.

Though not included in the definition of the thing that is caused, to be (*esse*) is nevertheless included in the *ratio* of the caused thing. "Est autem hoc de ratione causati, quod sit aliquo modo compositum, quia ad minus esse ejus est aliud quam quod quid est" (*ST*, I, q.3, a.7 ad 1).

[86]Cf. texts *supra*, n. 57.

[87]Fabro observes that for St. Thomas the entitative composition of creatures can follow from the fact that they are caused; or, vice versa, the fact that they are caused can follow from their entitative composition, according as St. Thomas is treating the question in the role of a theologian or in that of a philosopher. "Non bisogna quindi meravigliarci se la ragione che in alcuni testi funge da protasi, in altri si trovi come apodosi, e viceversa" (C. Fabro, *La Nozione Metafisica di Partecipazione secondo s. Tommaso d'Aquino* [2a ed.; Turin: Società Editrice Internazionale, 1950], p. 214).

had already been joined to the notion of the thing's nature through the reasoning contained in the body of the article.

But the original query remains unanswered. In the body of the article the notion of a thing as "participated being" was established ultimately on the basis that some sensible things were efficiently caused by others and that for everything, except God, to be is caused by another.[86] "Participated being" was established by "caused being." Now, in the answer to the *argumentum* in question, the sequence is reversed. "Caused being" follows upon "participated being."

Does this mean that either follows from the other, indifferently? Or is it a question of viewpoint—when St. Thomas is speaking as a theologian, participation is prior to causality, but causality is prior to participation when he is speaking as a philosopher?[87] Or is St. Thomas simply using the participation doctrine as a convenient framework in which to set what is established independently on other grounds? Is he merely using the language of participation to express to his contemporaries a metaphysical doctrine of being which that language had never expressed before? Or is there something in the Thomistic metaphysics itself which allows a mutual priority, though from different viewpoints?

This problem goes to the core of the Thomistic doctrine of being. The nature of a thing is known by concepts; the being (*esse*) of that thing is grasped originally in the judgment.[88] But the being (which is

[86] "Cum in re duo sint, quidditas rei, et esse ejus, his duobus respondet duplex operatio intellectus. Una quae dicitur a philosophis formatio qua apprehendit quidditates rerum, quae etiam a Philosopho in *III De anima* dicitur indivisibilium intelligentia. Alia autem comprehendit esse rei" (*In I Sent.*, d.38, q.1, a.3, solut.). "Prima quidem operatio respicit ipsam naturam rei. . . . Secunda operatio respicit ipsum esse rei" (*In de Trin.*, q.5, a.3; ed. Wyser, p. 38, ll. 8-11). "Cum autem intellectus compositionem format, accipit duo, quorum unum se habet ut formale respectu alterius: unde accipit id ut in alio existens; propter quod praedicata tenentur formaliter. Et ideo si talis operatio intellectus ad rem debeat reduci sicut ad causam, oportet quod in compositis substantiis ipsa compositio formae ad materiam, aut ejus quod se habet per modum formae ad materiam, vel etiam compositio accidentis ad subjectum, respondeat quasi fundamentum et causa veritatis, compositioni quam intellectus interius format et exprimit voce" (*In IX Metaphys.*, lect. 11 [Cathala No. 1898]).

There need be no hesitation in using the Thomistic term "judgment" to denote the second operation of the intellect. Although "judgment" for St. Thomas originates in the sphere of justice and is extended to speculative matters (*ST*, II-II, q.60, a.1 ad 1), it is used by him for this act of *cognition* apart from the sense of estimating something already known.

grasped in the judgment that a thing is) is *from* another and so is received *in* a potency by way of act. It can therefore be *conceived* as an act, after the analogy of formal act: as form is to matter, so to be is to the essence. Under this concept, "to be" can function as the subject of propositions. However, that *concept* of existence can never establish the existence of anything whatsoever, as is clear from St. Thomas's treatment of the Anselmian argument. In proving the existence of God, the *secunda via* of St. Thomas is working on things existing in the sensible world. On the basis of their being, attained in the act of judgment, the *secunda via* establishes God as the first efficient cause; from this it follows that God is subsistent being, in which nature or essence (attained in conceptualization) and to be (originally attained in judgment) coincide. The divine being, accordingly, can be conceived as a nature from which all other things participate being. In this reasoning, based on the order of judgment, participation follows from efficient causality.

The *argumentum* of the article, on the other hand, is dealing with *concepts* from the start. The answer to it aims to show that although "caused" is not contained in the concept which is the definition of the caused thing, it follows from the concept which is the notion of participated being as established in the body of the article. "Being" is conceptualized in the notion of "participated being" and so brought under a cadre which St. Thomas relates to the doctrines of Plato and Aristotle. From this concept of "participated being" follows the con-

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Treating *ex professo* the second act of the intellect, St. Thomas repeatedly terms it "judgment," in the sense of an act of *cognition*. "*Cognoscere* autem praedictam conformitatis habitudinem, nihil est aliud quam *iudicare* ita esse in re vel non esse, quod est componere et dividere: et ideo intellectus non *cognoscit* veritatem nisi componendo vel dividendo per suum *iudicium*. Quod quidem *iudicium*, si consonet rebus, erit verum; puta, quod intellectus *iudicat* esse quod est, vel non esse quod non est. Falsum autem quando dissonat a re; puta, cum *iudicat* non esse quod est . . . Philosophus de veritate hic loquitur, secundum quod pertinet ad intellectum humanum, qui *iudicat* de conformitate intellectus componendo et dividendo. Sed *iudicium* intellectus divini de hoc est absque compositione et divisione . . . quando additur esse vel non esse, per quae exprimitur *iudicium* intellectus" (*In I Perîherm.*, lect. 3 [Leonine Nos. 9-13]).

It is hard to see, therefore, why the "correct Thomistic judgment" should be restricted to the notion of "passing judgment on," since it obviously denotes also the notion of "*knowing* truth." F. A. Cunningham, stressing the derivation of the word from the sphere of justice, writes: "The second operation of the intellect seems to be the only operation in any cognitive faculty in which a correct Thomistic judgment does not take place" (THE MODERN SCHOOLMAN, XXXI [1954], 207). Cf. *ibid.*, p. 185.

cept of "caused being," just as risibility follows from man; for to have being by participation means to have it from another, to have it as caused.

In a word, the causal proposition is established by St. Thomas on the basis of the being attained in *judgment* independently of, and prior to, participation. But the *concept* of participated being attained as a result of that reasoning necessarily involves the concept of caused being, and so in the order of concepts "caused being" follows necessarily on the concept of "participated being."

XI The Unicity and Plurality of Being

Fundamentally, the problem faced by St. Thomas Aquinas in this respect is the problem faced centuries before by Parmenides. Of its nature being has to be one and unique, and yet it presents itself to human cognition in a plurality.[89] Where to be is identical with an essence, where being is found as a *nature*, it is, St. Thomas shows, actually unique and uncaused. In all other instances it is not present as a nature but as the act of a nature which is different from itself. The process of reasoning starts, of course, with the beings immediately known, those of the sensible world. The nature of these things is seen to abstract from their being; and they are other than their being, and their being is other than themselves. But they do not prescind from their being. They cannot be at all without some kind of being, either in the mind or in reality. Since their being is not included in their

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[89] "Esse autem, in quantum est esse, non potest esse diversum; potest autem diversificari per aliud quod est praeter *esse*, sicut *esse* lapidis est aliud ab *esse* hominis" (*CG*, II, cap. 52 [ed. Leonine, XIII, 387a21-24]). ". . . ipsum esse quod est communissimum. Ipsum igitur esse secundum se subsistens est unum tantum" (*De Sub. Sep.*, cap. 6; ed. Perrier, No. 43). Cf. texts *supra*, n. 65. From the viewpoint of the *esse*, the precision or nonprecision of additional distinguishes the primary *esse* from the *esse* which is predicable of other things. "Nec oportet si dicimus quod Deus est esse tantum ut in errorem eorum incidamus qui Deum dixerunt esse illud esse universale quo quelibet res formaliter est. Hoc enim esse quod Deus est huius conditionis est quod nulla sibi additio fieri possit . . . Esse autem commune sicut in intellectu suo non includit additionem, ita non includit in intellectu suo aliquam precisionem additionis, quia si hoc esset, nichel posset intelligi esse in quo super esse aliquid adderetur" (*De Ente*, cap. 5; p. 37, l. 21 - p. 38, l. 12). Cf. *In I Sent.*, d.8, q.4, a.1 ad 1; *ST*, I, q.3, a.4 ad 1. *CG*, I, cap. 26 (ed. Leonine, XIII, 82b13-37).

essence, it is accidental to them. But since it is what is most intimate to them and prior to their essence, it cannot be accidental in the sense of an inherent form or of an accident whose primary dependence is upon their essence. The substance on which it primarily depends has to be other than the substance which it makes to be. That means that it must be *from* another and received into the nature to which it gives being, as the act of that nature. Unlike an Aristotelian form or nature,

[90]". . . unumquodque enim actu est per hoc quod esse habet" (*CG*, II, cap. 53; ed. Leonine, XIII, 391a13-14). ". . . omnis enim forma et actus est in potentia, antequam esse acquirat" (*ibid.*, cap. 52; p. 388a2-3). Cf. "Cette notion précise d'un acte de la forme, qui n'aurait aucun sens dans la doctrine d'Aristote, était une nouveauté métaphysique . . ." (E. Gilson, "Cajétan et l'existence," *Tijdschrift voor Philosophie*, XV [1953], 268-69).

[91]"Unicuique enim est prius secundum naturam illud quod est ei ex se, quam id quod est ei ab alio. Quaelibet autem res praeter Deum habet esse ab alio. Ergo oportet quod secundum naturam suam esset non ens, nisi a Deo esse haberet; sicut etiam dicit Gregorius quod omnia in nihil deciderent, nisi ea manus omnipotentis contineret: et ita non esse quod ex se habet naturaliter, est prius quam esse quod ab alio habet, etsi non duratione" (*In II Sent.*, d.1, q.1, a.5, ad 2 in contr.). ". . . illud quod habet esse ab alio, in se consideratum, est non ens, si ipsum sit aliud quam esse quod ab alio accipit" (*De Pot.*, q.3, a.13 ad 4). "Similiter igitur id quod participat esse, oportet esse non ens. Quod autem est in potentia ens et participativum ipsius, non autem secundum se est ens . . . Si igitur per hoc quod dico "non ens" removeatur solum esse in actu, ipsa forma secundum se considerata est non ens, sed esse participans" (*De Sub. Sep.*, cap. 6; ed. Perrier, Nos. 44-45).

[92]Cf. texts from *ST*, *CG*, and *De Ente*, *supra*, nn. 57 and 67. The *contingence* of things—for instance, "omne quod est possibile esse et non esse, habet causam aliquam: quia in se consideratum ad utrumlibet se habet; et sic oportet esse aliquod aliud quod ipsum ad unum determinet" (*CG*, II, cap. 15; ed. Leonine, XIII, 295b19-23)—is not wide enough to serve as a basis upon which to establish the causal proposition in its full universality, for it does not extend to necessary created things (cf. *supra*, n. 22). On the texts of St. Thomas where the temporal origin of things is given as a reason that they are caused, cf. *supra*, n. 41. The reason why such things require a cause is that they have to *receive* their being from another; but the ultimate reason why they have to receive their being from another is that being is accidental to their natures.

Similarly in the texts where *composition* is given as the reason why things require a cause—for instance, "omne compositum causam habet" (*ST*, I, q.3, a.7); "omne quod alicui convenit non secundum quod ipsum est, per aliquam causam convenit ei" (*CG*, II, cap. 15; ed. Leonine, XIII, 294a5-b2); ". . . ea enim quae per se non sunt unum, si coniungantur, oportet per aliquam causam uniri. Esse igitur convenit illi quidditati per aliquam causam" (*CG*, I, cap. 22; ed. Leonine, XIII, 68a50-b5)—the reason for the necessity of an *efficient* cause lies in the entitative composition of essence and being. But that composition has to be demonstrated through the accidental order which such natures have to their being, as in the last text cited from the *Contra Gentiles*: ". . . oportet quod huiusmodi esse sit aliquid praeter essentiam eius. Omne autem quod convenit alicuius quod non est de essentia eius, convenit ei per aliquam causam" (*ibid.*). So in the *De Ente et Essentia* the entitative composition of act and potency was proved from the accidental character of the *esse* (cf. *De Ente*, cap. 4; p. 34, l. 7 - p. 36, l. 3).

the Thomistic form, though act, is *not* act *of itself.*[90] Of itself it is not-being.[91] It has no being whatsoever apart from the act which makes it be.

In this way the plurality of beings is explained. The things of the sensible world are not of their own nature being but are natures different from being. They have to receive their being *from another.* But being is in each case their ultimate *act,* without in any case being found in them as a nature or as a form. Where being is found as a nature, then it is no longer a plurality but is unique. Only through efficient causality, therefore, can being be multiplied.

XII Conclusion

For St. Thomas, then, the basic metaphysical formulation of the causal proposition is that everything for which to be is other than its nature has its being (*esse*) from another.[92] This is the conclusion of a strict demonstration. The first step in that demonstration is to show that a thing abstracts from its being without prescinding from it. This itself is a difficult demonstration in which the nature of the thing is compared with its different ways of being. The being which is attained in the judgment and which is other than that nature is used as the middle term. The second step is to show that the being of a thing is accidental to it, not in the sense of a property or a predicamental accident, which would be subsequent to the nature, but in the sense of an accident which is in its own way absolutely prior to that nature. The notion of accident in this sense is used as a middle term. The conclusion is that to be for such a nature is *ab alio.* This is the causal proposition. Further reasoning establishes the relation of act and potency and sets up the concept of all being except the primary being as "participated being." In that concept, of course, the concept of "caused" is involved. But this sequence in the conceptual order presupposes that the causal proposition has already been established on grounds of the being originally attained in the act of judgment.

With these considerations in mind one may now directly approach the problems raised by the controversy regarding the causal proposition.

First of all, there need be no difficulty about the immediate evidence of the concepts of cause and effect. These are obtained immediately from internal experience.[93] They are generalized by an easy and habitual process, which becomes as it were a second nature,[94] and so are extended to all contingent things. The problem, accordingly, is not at

[93]"Ammettono che il concetto di causa dal quale affermiamo dipendere il fenonmeno che percepiamo, ce lo formiamo in virtù della conscienza della nostra causalità personale" (G. Vinati, *Compte Rendu du 4e Congrès International des Catholiques* [Fribourg, Suisse; 1898], 3 Section, p. 648). "So bleibt uns nur die *innere Erfahrung*. Hier nimmt der Verstand den kausalem Einfluss unmittelbar wahr, vor allem bei der Setzung frei gewollter Akte; da gewahren wir nicht nur, dass der Akt 'mein' ist, mir inhäriert, sondern auch dass er von mir, durch meinen Einfluss hervorgebracht, ins Dasein gesetzt ist" (A. Pechhacker, *Scholastik*, xxv [1950], 529). That the conception of cause originates in internal experience is borne out by modern experimental findings. "The fact that the idea of force owes its existence to inner experience seems to be beyond dispute. To Maine de Biran belongs the merit of having stressed this origin" (J. Piaget, *The Child's Conception of Causality*, [London: Kegan Paul, Trench, Trubner & Co., 1930], p. 126). "It is the result of internal experience, but not of an experience which is felt as internal from the first" (*ibid.*, p. 130). On the insuperable psychological difficulties in accepting causality as an a-priori form, cf. *ibid.*, pp. 272-73.

[94]St. Thomas states in regard to the immediate evidence of the proposition that God exists: "Consuetudo autem, et praecipue quae est a puero, vim naturae obtinet: ex quo contingit ut ea quibus a pueritia animus imbuitur ita firmiter teneat ac si essent naturaliter et per se nota" (*CG*, I, cap. 11; ed. Leonine, xiii, 24a4-8). May not the same be said of the causal proposition and its acceptance on grounds of common sense?

[95]". . . quaelibet propositio, cujus praedicatum est in ratione subjecti, est *immediata* et *per se nota*, quantum est in se. Sed quarundam propositionum termini sunt tales, quod sunt in notitia omnium . . . Quaedam vero propositiones sunt immediatae, quarum termini non sunt apud omnes noti" (*In I Post. Analyt.*, lect. 5; ed. Leonine, No. 7). ". . . et ideo per se et secundum se est notum. Sed quia quidditas Dei non est nobis nota, ideo quoad nos Deum esse non est per se notum, sed indiget demonstratione" (*De Ver.*, X, a.12). Cf. *ST*, I, q.2, a.1; *CG*, I, cap. 11; ed. Leonine, xiii, 24a4-20; *De Pot.*, q.7, a.2 ad 1.

J. Maritain says that the principle of causality is immediately known in the manner of a "proposition *per se secundo modo*": "Dans la proposition 'tout qui est contingent est causé,' le prédicat n'est pas contenu dans la notion du sujet, mais le sujet est nécessairement contenu,—à titre de sujet propre,—dans la notion du prédicat" (*Approches de Dieu* [Paris: Alsatia (1953)]), p. 30. So is interpreted the answer of St. Thomas in *ST*, I, q.44, a.1 ad 1; cf. "Tel est par exemple, parmi les propositions de cette sorte connues immédiatement et sans discours, le cas du principe de causalité: *être causé* ne fait pas partie de la définition d'*être contingent*, mais c'est une propriété, une 'propria passio' qui a l'être contingent pour sujet propre" (*Réflexions sur l'intelligence* [3d ed.; Paris: Desclée de Brouwer, 1930], p. 72); cf. *ibid.*, nn. 1 and 2. In this interpretation the notion of "contingent," as the proper subject of "caused," would have to be taken in a sense wide enough to include such necessary beings as the angels (cf. *supra*, nn. 22 and 92). But even so, there would still remain the task of showing that "caused" is related to "contingent" in the full sense of a "propria passio"; that is, something without which the thing cannot be understood to be (cf. *De An.*, a.12 ad 7; text *supra*, n. 38). The fact that something is a nose does not show that it is snub; the fact that something is a number does not show that it is even.

all to explain the psychological genesis of the causal proposition but rather to justify metaphysically its universality and necessity.

Secondly, the formal sequence by which, for instance, the premises are the cause of the conclusion or human nature the cause of risibility is self-evident once the terms are clearly understood. There is no special problem here. It is in the order of efficient causality that the causal proposition requires *demonstration.* The notion of demonstrating this proposition is, accordingly, in no way self-contradictory. The premises of the demonstration can be the cause of the conclusion on their own evidence, without in any way taking for granted the causal proposition in its universality. The demonstration of the causal proposition does not presuppose that the proposition has already been implicitly accepted through the use of syllogistic reasoning.

Thirdly, may the causal proposition, even though it is the conclusion of a demonstration, be termed "analytic"?

Being, and so the reception or giving of being, is not contained in the original concept of any contingent thing. Accordingly, the notion of "caused," in the sense of efficient causality, cannot be obtained from an analysis of that concept. When, after the reasoning process of St. Thomas (based on what is outside that concept and attained in the act of judgment), the metaphysical concept of a created thing has been established as the concept of participated being, then the order to a cause is contained in that concept, somewhat as actually existing is contained in the metaphysical concept of God when that concept is based upon the result of existential reasoning. In this sense the causal proposition might be called analytic, in the sense of being in itself immediately and *per se* evident, even though it is not immediately and *per se* evident to the human intellect; just as the proposition "God exists" is *per se nota quoad se* but not *quoad nos.*[95] But this use of the term "analytic" is alien to its original Kantian sense, as it allows strict

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In a word, although the notion "caused" might not be found in anything other than the contingent, it would not immediately guarantee that everything contingent must be caused. That would still have to be demonstrated through the peculiarly accidental character in the being of such contingent things.

These considerations apply likewise to the similar position of F.-X. Meehan, *Efficient Causality in Aristotle and St. Thomas* (Washington: Catholic Univ. Press, 1940), pp. 336-67.

reasoning and extends human knowledge.[96] This use of the term, then, will inevitably engender confusion.[97]

These considerations show, however, that the causal proposition is not synthetic *a priori*. It is based upon things, not upon the exigencies of human reason. It is not postulated but is *concluded* from the nature and being of things. One may say with truth that the being of created things cannot be understood except as caused;[98] but the reason for that exigency lies ultimately not in the human intellect but in the being of those things themselves. They would have to have a cause even though no human intellect ever considered them, as human reasoning itself is able to demonstrate.

Fourthly, the ultimate justification of the causal proposition in its universality and necessity lies not in the contingent or the limited or the participated character of things, nor even, precisely, in their com-

[96]Cf. Th. Droege, "Zur Begründung des Kausalprinzips," *Divus Thomas* (Freiburg), ser. 3, XII (1934), 186-87.

[97]"Quasi tutti gli scolastici moderni hanno ceduto alla tentazione di identificare questa vecchia terminologia con quella Kantiana dei giudizi 'analitici' e 'sintetici,' senza badare troppo al fatto che le terminologie filosofiche spesso sono solidali con tutto il sistema in cui sono sorte, e soltanto in esso possono conservare il loro significato genuino" (C. Fabro, *Rivista di Filosofia Neoscolastica*, XXVIII [1936], 118).

[98]". . . tamen esse quod rebus creatis inest, non potest intelligi nisi ut deductum ab esse divino; sicut nec proprius effectus potest intelligi, nisi ut deductus a causa propria" (*De Pot.*, q.3, a.5 ad 1). This answers the question as it was placed in the *argumentum:* "Sed intellectus noster potest aliquid intelligere non intelligendo illud esse a Deo." Here, as in *ST*, I, q.44, a.1 ad 1, the *nature* of a thing can be understood without the efficient cause: ". . . cum causa efficiens non sit de natura rei, et sic sine ea res intelligi possit."

[99]"Ipsa autem principia immediata non per aliquod medium extrinsecum cognoscuntur, sed per cognitionem propriorum terminorum" (*In I Post. Analyt.*, lect. 7; ed. Leonine, No. 8). ". . . philosophia prima non demonstrat principia communia, sunt enim indemonstrabilia simpliciter; sed aliqui errantes tentaverunt ea demonstrare, ut patet in IV *Metaphysicae*" (*ibid.*, lect. 20, No. 5). "Ex ipso enim lumine naturali intellectus agentis prima principia fiunt cognita, nec acquiruntur per ratiocinationes, sed solum per hoc quod eorum termini innotescunt. Quod quidem fit per hoc, quod a sensibilibus accipitur memoria" (*In IV Metaphys.*, lect. 7 [Cathala No. 599]). Geiger's observation regarding the participation formulae holds equally well in respect to the various Thomistic formulae of the causal proposition: "On risque dès lors de prendre pour des principes premiers et évidents, ce qui n'est que le rappel schématique de démonstrations dont les éléments ont été analysés et décrits, en partie, ailleurs" (*La participation*, p. 17).

[100]For instance, *De Ente*, cap. 4; p. 29, ll. 32 ff.

[101]". . . l'érection de la causalité en principe formel de la connaissance: tout être a une cause, n'ajoute rien à notre connaissance des causes comme *principia rerum*. Le contenu réel et la force contraignante de l'inférence causale ne sont pas dus chez saint Thomas à la vérité d'un tel principe formel, mais à l'évidence intrinsique de la cause en chaque cas donné" (E. Gilson, *Revue Thomiste*, LX [1952], 60).

position, but rather in the *accidental* order which all things, with one unique exception, have to their being.

Finally, if one wishes to call a "principle" every proposition whose necessity and universality are firmly established, then one may name the causal proposition a principle. But in this case one has to distinguish the proposition from a principle in the epistemological sense of a judgment which does not follow from prior premises.[99] The causal proposition is, on the contrary, a strictly demonstrated conclusion.

But even when using "principle" in a wider sense than this epistemological connotation, may not one still ask of what type of reasoning is the causal proposition a principle? Is it a principle for reaching the existence of God? Hardly. Any particular order of efficient causes suffices for that proof. The generalization of the causal proposition may emerge in the course of the demonstration, but that is a by-product rather than a principle of the proof. Similarly, any reasoning about sensible things does not presuppose the universal and necessary causal proposition but only particular instances of causality from which the general proposition may be proved. In reasoning about the angelic natures, however, the causal proposition may well function as a principle.[100] Those natures are not immediately known to men, but on the basis of the causal proposition they can be established as potency to existential act.

The causal proposition, therefore, has a very limited use in a philosophy which, like that of St. Thomas Aquinas, places the origin of human cognition in sensible things.[101] The whole controversy concerning the proposition can be seen in its true perspective only when it is parted from the Cartesian and Leibnizian background in which it arose. In that background "principles" had an origin independent of sensible things. Where, in contrast, sensible things are the origin of all human knowledge and where those things are of a nature which is different from, but always open to, the act of being, they provide the basis for a rigorous demonstration in which the causal proposition follows as a conclusion from the accidental character of their being.

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THE ONTOLOGICAL ARGUMENT IN ST. ANSELM AND DESCARTES

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According to Immanuel Kant, "to attempt to extract from a purely arbitrary idea the existence of an object corresponding to it is a quite unnatural procedure and a mere innovation of scholastic subtlety."[1] From such an attempt, Kant claims, "arose the unfortunate ontological proof which yields satisfaction neither to the natural and healthy understanding nor to the more academic demands of strict proof."[2] The natural and healthy understanding of which Kant speaks is, doubtless, the understanding of Kant himself, of which he tells us that though it sounds strange at first, it is not the less certain to say that such a natural and healthy "understanding does not draw its *a priori* laws from nature but prescribes them to nature."[3]

With Kant's opinion on the extortion of existence from *a purely arbitrary idea,* eleventh-century St. Anselm and seventeenth-century Descartes would intelligently concur. They would quickly agree with Kant that such a procedure is quite unnatural. As for Kant's claim that it was a mere innovation of Scholastic subtlety, Descartes would agreeably have joined Kant in this historical judgment, adducing as evidence that argument from the mere name of God, adversely cited by St. Thomas and brought to Descartes's attention by Caterus.

Neither St. Anselm nor Descartes knew his proofs for the existence of God under that effective term of Kant, ontological. The question, how-

ever, is, Are the proofs in historical fact what Kant means by the term ontological? As Kant uses this term it signifies a procedure of abstracting from all experience and arguing completely a priori from mere concepts to the existence of a supreme cause. Such concepts, Kant maintains, may be logically possible but none the less empty, unless the objective reality of the synthesis through which the concept is generated has been specifically proved. And such proof, Kant holds, rests on principles of possible experience and not on the principle of analysis; that is, not on the law of contradiction. This, admonishes Kant, "is a warning against arguing directly from the logical possibility of concepts to the real possibility of things."[4]

When the so-called ontological argument of St. Anselm is reduced to its minimal expression, it seems to provide grounds for suspicion that Kant's conclusion was correct, even if some of the reasons by which Kant supports his analysis are similar to those he is criticizing. In that minimal expression the argument of St. Anselm may be paraphrased as follows: By faith we believe God to be a being than which

[1]*Critique of Pure Reason,* "Transcendental Dialectic," Chap. 3, Sec. 5; trans. by N. K. Smith (New York, 1950), pp. 507-8.

[2]*Ibid.*

[3]*Prolegomena to Any Future Metaphysics,* Part II, Sec. 36; trans. by P. G. Lucas (Manchester, 1953), p. 82.

[4]*Critique of Pure Reason,* "Transcendental Dialectic," Chap. 3, Sec. 5; p. 503.

[5]St. Anselm, *The Proslogion,* Chap. II; trans. by A. C. Pegis, *The Wisdom of Catholicism* (New York, 1949), pp. 208-9. For the Latin text, see *PL,* Vol. CLVIII, col. 227b–col. 228a.

[6]St. Anselm, *Liber Apologeticus contra Gaunilonem Respondentem pro Insipiente,* Cap. VIII; *PL,* Vol. CLVIII, col. 257c - col. 258b. For an English translation of several works of St. Anselm see *St. Anselm,* Proslogium, Monologium, In Behalf of the Fool by Gaunilon, Apologetic against Gaunilon and Cur Deus Homo, trans. by S. N. Deane (Chicago: Open Court Publ. Co., 1939). For Chapter 8 of the *Liber Apologeticus,* see Deane, pp. 166-68.

[7]"Cumque omnes, ut cautissime ad sacrae paginae quaestiones accedant, sint commonendi; illi utique nostri temporis dialectici (imo dialectice haeretici, qui non nisi flatum vocis putant esse universales substantias, et qui colorem non aliud queunt intelligere quam corpus, nec sapientiam hominis aliud quam animam) prorsus a spiritualium quaestionum disputatione sunt exsufflandi. . . . Qui enim nondum intelligit quomodo plures homines in specie sint unus homo; qualiter in illa secretissima et altissima natura comprehendet quomodo plures personae, quarum singula quaeque est perfectus Deus, sint unus Deus? . . . Denique qui non potest intelligere aliquid esse hominem, nisi individuum; nullatenus intelliget hominem, nisi humanam personam. Omnis enim individuus homo, persona est. Quomodo ergo iste intelliget hominem assumptum esse a Verbo, non personam, id est aliam naturam, non aliam personam esse assumptam?" (St. Anselm, *De Fide Trinitatis et de Incarnatione Verbi,* Cap. II; *PL,* Vol. CLVIII, col. 265a-c).

[8]"Sed certe idem ipse insipiens, cum audit hoc ipsum quod dico, aliquid quo majus nihil cogitari potest; intelligit quod audit, et quod intelligit in intellectu ejus est; etiamsi non intelligat illud esse. Aliud est enim rem esse in intellectu; aliud intelligere rem esse" (St. Anselm, *Proslogion,* Cap. II; *PL,* Vol. CLVIII, col. 227c).

none greater can be thought. Even the fool who says in his heart "there is no God," hearing what we believe God to be, understands what he hears, and what he understands at least exists in his understanding. Now it is evident that "that than which a greater cannot be thought" cannot exist solely in the understanding, for existing in reality is greater than merely in the understanding. Then, if such a being exists merely in the understanding then that being than which a greater cannot be thought is that than which a greater can be thought. But this is contradictory. Hence the being than which a greater cannot be thought exists both in the understanding and in reality.[5] That is the proof for which Anselm searched so long, a proof, he tells us, needing only itself as demonstration.

What are the factors in St. Anselm's thought which we need to grasp to see the argument as closely as possible to the way he himself saw it? First, the idea of God whose object is the essence of God (*id quod Deus est*) is neither a capricious construction nor a refinement from sensible experience. Anselm unequivocally affirms that, in the *Proslogion*, he accepts the concept of God from which his proof begins from sacred authority; that is, from faith. However, those not accepting this source for their vague but preliminary notion of the nature of God may by natural reasoning arrive at the same notion of God. Consequently *the source* of the initial concept in the proof is no locale for cogent objection. In Anselm's opinion neither of those two ways in which the idea of God is achieved would permit it to be designated as a purely arbitrary idea.[6]

The second factor is St. Anselm's conviction that the objects of ideas are universal substances; that these universal substances are what we call essences; that every universal substance is in itself a reality;[7] that when the essence is known, this reality, which the essence is, is in its reality in the intellect;[8] that this existence of the essence in thought is a true way for the essence to be. These aspects of Anselm's thought are the bases for the proper and accurate term "Anselmian realism."

Because, for St. Anselm, (1) the object of every true idea is a reality and (2) when known this reality has an existence in thought, the essence of fire or water is a reality; and when it is known *id quod* fire is or *id quod* water is, this reality which is the essence of fire or water

is in the understanding with a true existence. Such is also the case with the idea of God. *Id quod Deus est* or the essence of God is but vaguely, primitively, and imperfectly expressed in the term "a being than which none greater can be thought." Nevertheless, God's essence, *id quod* God is, somehow has being in the intellect understanding that God is "a being than which none greater can be thought."[9] The existence in the mind of a real essence is not nothing, nor is it the highest modality of reality which it may exercise. The ontological argument is indeed unintelligible apart from a knowledge of the universality of Anselm's realism.

The question for St. Anselm obviously is, in the case of the idea of God, Can the essence of "that than which none greater can be thought" exist only in the mind? If it existed only in the mind Anselm is convinced that a greater could be thought of; namely, one which would also have existence outside thought, in actual reality. Then that which existed only in the mind would not be that than which none greater can be thought. This is the third factor in St. Anselm's thought: that existence both in thought and in reality is greater than existence in thought alone.

The conclusive step of the Anselmian dialectic provides us with the fourth factor. Having been a professor of logic and considering himself an orthodox dialectician in opposition to the heretical dialectics of the nominalist Roscelin, Anselm taught the reality of the objects of ideas—for him, a necessary alternative to the theologically impossible consequences of Roscelin's nominalism. Now the primary criterion of a true idea, for St. Anselm, was the self-evident necessity of the principle of contradiction. Anselm uses that criterion in the following way.

[9]"Aliter enim cogitatur res, cum vox eam significans cogitatur; aliter cum idipsum, quod res est, intellegitur. Illo itaque modo potest cogitari Deus non esse; isto vero minime. Nullus quippe intelligens id quod sunt ignis et aqua, potest cogitare ignem esse aquam secundum rem; licet hoc possit, secundum voces. Ita igitur nemo intelligens id quod Deus est, potest cogitare quia Deus non est. . . . Deus enim est id quo majus cogitari non potest" (*ibid.*, Cap. IV; col. 229a). Also see n. 8 above.

[10]*Proslogion*, Chap. II; trans. Pegis, p. 209 (*PL*, Vol. CLVIII, col. 228a).

[11]*Ibid.*, Chap. III; p. 209 (col. 228b). "Sic ergo vere est aliquid quo majus cogitari non potest, ut nec cogitari possit non esse: et hoc es tu, Domine Deus noster."

[12]Etienne Gilson, "Sens et nature de l'argument de saint Anselme," *Archives d'histoire doctrinale et litteraire du moyen age*, IX (1934). 9.

[13]*Dialogue on Truth*, Chap. II; trans. by Richard McKeon, *Selections from Mediaeval Philosophers* (New York, 1929) I, 153. For the Latin text, *Dialogus de Veritate*, see *PL*, Vol. CLVIII, col. 470a—col. 471b.

God is that than which nothing greater can be thought. What is thought to be both in the intellect and in actual reality is greater than what is thought to be only in the intellect. Now if that than which a greater cannot be thought exists only in the intellect, then that than which a greater cannot be thought is that than which a greater can be thought. But such a condition is impossible, because of the principle of contradiction. It is therefore contradictory to maintain that the being than which a greater cannot be conceived exists only in the intellect. A notion of that than which a greater cannot be conceived, which being would be lacking actual existence, is for Anselm a self-contradictory notion.[10] Such a being lacking existence is impossible to conceive; hence it is necessary to think of God as existing. And because it is necessary to think of God as actually existing, St. Anselm finds himself compelled to affirm that God does in actual fact exist.

To repeat: Because it is impossible to think of God as nonexistent, it is necessary to think of God as existent. And for St. Anselm, to demonstrate the necessity of thinking God as existing is, by that very act, to demonstrate that God exists.[11] The necessity of God's existing follows from the necessity of our thinking that God exists.

In a penetrating analysis of St. Anselm's thought, Etienne Gilson has pointed out that behind Anselm's position that the necessity of affirming existence guarantees the reality of the existence there is the fundamental Anselmian position that the necessity of such an affirmation of existence presupposes the existence of the object of that affirmation. In effect, this amounts to saying that behind the dialectical structure of the Anselmian proof is an epistemological doctrine, the core of which is that the existence of a truth always presupposes the existence of its object.[12]

The significance of this insight for an Anselmian understanding of the ontological argument may be appreciated by listing briefly four essentially related elements in Anselm's doctrine of truth. (1) Spoken, written, or sign-language propositions are true when they do what their normal function is to do; namely, to signify thought faithfully.[13] (2) Thought is true when it does what is its normal function to do; namely, to signify things according to the way things are, for things

are the causes of true thought, the rule and measure of true thought.[14] (3) Things are true when they do what is their normal function; namely, to be exactly what their essences require them to be—that is, to exist and operate according to their pattern, the divine ideas of God who is the cause of their truth.[15] (4) God is supreme truth itself. Caused by nothing, supreme truth is the cause of all other truth. Truth is, therefore, improperly said of everything but God, for whatever is true is so only because of the one supreme truth.[16]

It is eminently clear from this list of Anselmian propositions that thought in no way fabricates its own truth; its truth is *caused* by whatsoever is the object of the true thought. Reason's idea of God as existing is necessary and true. Since a true thought *is caused* by its object, the true thought presupposes the existence of its object. Consequently, once we are in possession of a true thought regarding the existence of God we not only may but must conclude to the real existence of God, unique *cause* of such a true thought. The crucial question now to be answered by St. Anselm is, When are we certain that our thought is true?

It is the position of St. Anselm that where there is a necessary thought that necessary thought is a true thought. What, then, constitutes a necessary thought for Anselm? A thought is necessary when its content—that is, the reality which is the essence—squares with the principle of contradition. Every self-contradictory thought is an impossible thought. St. Anselm repeatedly indicates, both in the *Proslogion* and in the *Apologetic to Gaunilon*, that it is contradictory to think of "the being than which a greater cannot be thought" as nonexistent.[17] The necessary thought, then, is that which cannot be otherwise than it is without being self-contradictory. It is necessary, for example, to think that fire is not water, because, for St. Anselm, it is contradictory and therefore impossible to think that fire is water.

[14] *Ibid.* (col. 469c). ". . . res vero enuntiata non est in enuntiatione vera, unde non ejus veritas, sed causa veritatis ejus dicenda est." Cf. *ibid.*, Chap. x, p. 170 (col. 479a).

[15] *Ibid.*, Chap. vii, p. 163 (col. 475b).

[16] *Ibid.*, Chap. xiii, p. 183 (col. 486b); Chap. x (col. 479a).

[17] *Proslogion*, Chap. iii, trans. Pegis, p. 209, and Chap. iv, p. 210 (*PL*, Vol. clviii, col. 228b and 229b). *Apologetic against Gaunilon*, Chap. i, trans. Deane, p. 155; Chap. iii, p. 159; and Chap. iv, p. 161 (*PL*, Vol. clviii, col. 250a, col. 252b, and col. 254a).

[18] Cf. n. 9 above.

[19] *Dialogue on Truth*, Chap. ii, trans. McKeon, p. 153, and Chap. x, p. 170 (*PL*, Vol. clviii, col. 470a and col. 479a).

Similarly, the impossibility of thinking of God as nonexistent is equivalent to the necessity of thinking of God as existent.

The core problem, quite evidently, is whether there is an objective root for that necessity of thought and, if so, what is it. Within St. Anselm's realism there is such an objective root; and it is the stable reality which is, in effect, the essence, which inflexible essence is the content of thought. Not constructed by the mind, the essences are received by each mind which does what it is made to do; when the understanding works normally it simply receives, for example, *id quod* fire is, *id quod* water is, *id quod* God is. And no one understanding the reality or essence which fire is and the essence water is can think that fire is water. In exactly the same way, no one understanding the nature of God (*id quod Deus est*) can think of God as nonexistent.[18]

Although St. Anselm considers that the content of thought is the immutable, intrinsic necessity of an essence, he is by no means explicit in explaining *how* thought receives or acquires that essence, except in referring to the relation of the understanding and the senses as somehow involved, along with the illumination of the soul by God, in knowing the intrinsic necessity of the real essence. *How* it occurs, however, is not a matter of importance in the adequate discussion of our problem. What is of importance is to realize that, for St. Anselm, our mind is submitted to, ruled and measured by, the internal, immutable necessity of the essence. We must recognize that in such cases, when thought expresses or signifies the necessity of the essence, it is signifying that what is is. For to be is to be an immutable essence; and for thought to express what is or essence, is for thought to be true.[19]

Thus we see that, in St. Anselm's position, the intrinsic necessity of the real essence is the objective foundation of the necessity of thought not being otherwise than it is without being self-contradictory. A "nonexisting being than whom no greater can be conceived" is a self-contradictory thought. Its contrary is a necessary thought. And because, in a necessary thought, thought is doing what it is made to do—namely, submitting to the necessity of an essence, being ruled and measured by it and therefore expressing what is—each necessary thought is a true thought.

And each true thought presupposes the reality of its object as *cause*

of the truth of that thought. No exception is made for that necessary and therefore true thought which must think of "the being than which none greater can be thought" as existent. Its *cause* can be nothing less than its object; that is, the real and necessary existence of God. In other words, it could never be necessary, and therefore true, to think of God as existing unless God were in actual fact existing. Hence, as soon as St. Anselm demonstrates the necessity of affirming the existence of God, he is certain he has demonstrated the real existence of God.

Only God's essence is so immutable that existence is an intrinsic necessity of it. St. Anselm is clearly in the Platonic and Augustinian tradition in which being consists in immutability of essence, in which the degree of immutability constitutes the degree of being. God alone is absolutely immutable, always entirely what He is, always the same, having no aspect of otherness or nonbeing; and hence He alone is being properly and absolutely.[20] And because being is the immutability of essence, God as most properly and absolutely being is most properly called essence.[21] According to St. Anselm, such a being, than whom none greater can be conceived—that is, being in its proper and absolutely limitless significance—cannot be thought as nonexistent. In fact, the analysis of God's essence implies the necessity of His existence.

Anselm's position is what is known today as an essentialism; that is, a doctrine which commences with an assumed true and adequate knowledge of essence and derives from this essence, if possible, even the knowledge of existence. If to be is to be an essence, then all knowl-

[20]*Proslogion,* Chap. XXII, trans. Pegis, p. 223 (*PL,* Vol. CLVIII, col. 238c-d). "Tu solus ergo, Domine, es quod es; et tu es qui es. Nam quod aliud est in toto, et aliud in partibus; et in quo aliquid est mutabile, non omnino est quod est . . . et quod habet fuisse, quod jam non est; et futurum esse, quod nondum est, id non est proprie et absolute. . . . Et tu es qui proprie et simpliciter es . . . et ut bene sint."

[21]*Monologium,* Chap. VI; *PL,* Vol. CLVIII, col. 153a. "Ergo summa essentia, et summe esse, et summe ens, id est summe existens, sive summe subsistens non dissimiliter sibi convenient, quam lux, et lucere, et lucens."

[22]The criticism which a different notion of being than Anselm's levels against Anselm's essence-being approach is seen in St. Thomas, *ST,* I, q.2, a.1 ad 2. For an admirable analysis of the existential approach of St. Thomas, see J. Owens, C.Ss.R., "The Conclusion of the Prima Via," THE MODERN SCHOOLMAN, Vol. XXX (1952-53), Nos. 1-3.

[23]There is no positive proof, as Gilson points out, that Descartes ever read St. Anselm (*Etudes sur le role de la pensée médiévale dans la formation du système cartésien,* [Paris: Vrin, 1930], p. 222). A. Koyré marshals circumstances from which he concludes that Descartes's pretended ignorance of Anselm is a dissimulation (*Essai sur l'idée de Dieu* [Paris, 1922] pp. 185-88).

edge of existence must be derived from an analysis of the essence. If it belongs to the essence of an absolute being "than whom none greater can be conceived" to exist, then He exists. For St. Anselm, that essence which is properly and absolutely being is being under amplification to the infinite, being extended without any limitations. Being "than which none greater can be conceived" when understood as essence contains all that can be predicated of that essence; that is, there is no more in such a being than can be fully achieved by the simple understanding of the essence. In effect, existence is already contained in being amplified to the infinite; hence existence is grasped in the same intellectual act of understanding by which the essence (*id quod Deus est*) of God is grasped.[22]

The submission of the known essence of God, being in its absolute and proper fullness, to the principle of contradiction is Anselm's way of demonstrating that such an essence must necessarily be conceived as existent and hence must necessarily exist. In fine, in the simple act of understanding absolutely limitless and supreme being or essence Anselm discovers necessary existence as a property peculiar to such an unlimited absolute essence or being. Because existence is a property of absolute essence or being, existence is attained when absolute essence is understood. In this sense St. Anselm would readily agree that he remains at all times on the essential level because, for him, existence is but a necessary property of being extended to its absolutely highest degree or modality. Such being is *essentia;* that is, God.

Whether St. Anselm is a direct or indirect source of Descartes's argument is an interesting problem in itself; but not one for this article. Certainly Descartes projects a wide-eyed and apparently innocent ignorance of the historical precedence of St. Anselm in this matter.[23]

[*To be continued*]

RICHARD GRAMLICH, S.J., *West Baden College*

Livre des directives et remarques. **By Ibn Sīnā. Tr. with introd. and notes by A.-M. Goichon. Paris: J. Vrin, 1951. Pp. 552.**

Translations of the classical Arabian philosophers are still rare; and of these the versions which remain not only faithful to the original Arabic text but also intelligible to the reader are desperately few. In order to achieve such a translation one must be thoroughly acquainted with the technical terminology of Arabic Scholasticism and with the particular philosopher's system as a whole. In her former works A.-M. Goichon has extensively proved her rare mastery of Avicenna's terminology (cf. *Lexique de la langue philosophique d'Ibn Sīnā* and *Vocabulaires comparés d'Aristote et d'Ibn Sīnā*) and her clear insight into his thought (cf. especially *La distinction de l'essence et de l'existence d'apres Ibn Sīnā*). In this present work she fulfills abundantly what we have come to expect of her.

The translation is based on the text established by J. Forget, who edited the *kitāb al-'išarat wa 1-tānbihāt* under the title of *Le livre des théorèmes et des avertissements*. With good reason, however, Goichon replaced this commonly accepted title with this one: *Livre des directives et remarques*. Unfortunately, though, Goichon corrected only a few of the numerous printing errors of the Forget edition.

As for the contents, the book treats problems of logic, the science of nature, metaphysics, and mystics, all compiled in a very fragmentary manner and often without intelligible connection. This makes the understanding and therefore the translation extremely difficult. We should, then, not expect the translator to clarify all that needs clarification; this would necessarily involve interpreting the text in a way which gives no guarantee whatsoever that the Avicennian idea is rendered faithfully.

The following are, in our view, the principal merits of Goichon's work: (1) The translation is for the most part almost scrupulously literal and all vagueness is avoided by the use of an exact and unchanging terminology. This best allows a grasp of the original meaning of the text. (2) Many comparisons are made with the doctrines found in earlier works of Ibn Sīnā, especially the *Najāt* and the *Šifā;* this enables us to recognize a remarkable

consistency of thought; it also serves to clarify numerous statements which otherwise would remain obscure. (3) In our opinion no other book shows with similar distinctness the originality—for better and for worse—of Avicenna. This is accomplished by citing numerous parallel passages from his main sources, Aristotle and Plotinus. In this way the role of philosophical tradition in Avicenna's work becomes also evident, while the role of his original contribution to later, especially Latin, Scholasticism is neglected. But this is studied in Goichon's book *La philosophie d'Avicenne et son influence en Europe médiévale* (1940). (4) The consultation of the commentary of Tūsī is often helpful; it is regrettable that no other commentary could be used.

As is always to be expected in works of this kind, there are a number of defective and even incorrect renderings of the Arabic text. Here are some examples of unfortunate translations for which we propose corrections as follows: (1) Instead of ". . . celui qui lui fournit les explications dit," read "alors ce qu'il dit revient à ceci" (p. 93). Not *yu-awwilu,* but *ya'ūlu* in the text. (2) Instead of ". . . tu trouves les corps . . . tantôt juxtaposés, tantôt liés, tantôt éloignés," read ". . . tantôt juxtaposés, tantôt *rapprochés,* tantôt éloignés" (p. 274). The radicals are Q-R-B, not Q-R-N.

As an explanation of the relation between final and efficient causality we read on page 356: "La cause finale . . . est cause par le moyen de sa quiddité, car l'idée que la cause finale représente appartient à la causalitè de la cause èfficiente, mais elle est son effet en tant qu'elle existe." This translation is forced and not quite intelligible in spite of the clearness of the text. We should read: "La cause finale . . . est, par le moyen de sa quiddité et de son idée, cause de la causalité de la cause efficiente et elle est causée par elle dans son existence."

On page 362 we find a *directive* rightly entitled by the author "Demonstration de l'unité, *tawhīd,* de l'Être necessaire." Avicenna gives the substance of his reasoning in one short sentence, which, however, is not correctly translated and is therefore not clear. Instead of "L'Être nécessaire est celui qui se distingue soi-même, si cette sienne détermination existe parce qu'il est l'Être nécessaire, car il n'y a pas d'Être nécessaire autre que lui," we should read "L'Être nécessaire determiné,—si cette sienne détermination existe parce qu'il est l'Être nécessaire, alors il n'y a pas d'Être nécessaire autre que lui."

The *directive* on pages 399-400 proves that there is no finality in God's action; the higher being never takes the lower as its end, since the end is end only if willing it is the more fitting thing for the agent. To express this latter idea Avicenna writes: ". . . Même si (l'objet du choix) pouvait vraiment être dit plus digne en soi et meilleur (que son opposé), mais sans

qu'il soit alors du côté de l'agent plus convenable pour lui et mieux de le rechercher et de le vouloir, il ne serait pas une fin." Instead of this translation, Goichon gives the following obscure version: ". . . si (l'objet du choix) pouvait vraiment être dit plus digne en soi et meilleur, il n'y aurait pas (a se demander) du côté de l'agent s'il est plus digne de lui de le rechercher et de le vouloir ou s'il est meilleur de n'avoir pas de but."

On page 439 Ibn Sīnā gives the reason why the sense faculties do not perceive the sense organs, nor the sense perceptions, but only their objects: they act *through* the organ ("bi-'l'ālati"), not *on* the organ ("fi-'l'ālati"). "Fa'ala fi" in the sense of "to exercise one's action on" is quite usual in Arabic. Therefore, we should read: "Ce qui produit son acte par un instrument sans avoir d'acte propre, n'agit pas *sur* l'instrument," and not "*dans* d'instrument".

Treating the problem of evil, Avicenna shows why it is necessary that there be things which, though good in themselves, are always accompanied by evil effects. The translation which states that the abolition of these beings "aboutirait à ce qu'il manquât beaucoup de bien; on provoquerait par la beaucoup de mal pour préserver de petits maux" is not correct. The exact translation of this text shows in one sentence a clear summary of Avicenna's solution: "Car il y a beaucoup de mal en ce que, pour éviter peux de mal, beaucoup de bien ni existe ni est produit."

These occasional deficiencies do not, however, diminish the general value of the book. Among the existing translations of Arabic philosophical works we can scarcely find its equal. The introduction, a masterpiece of philosophical and historical synthesis, alone would merit a careful analysis, but this would pass beyond the limits of this review.

JAMES COLLINS, *Saint Louis University*

De l'existence à l'être: La philosophie de Gabriel Marcel. **By Roger Troisfontaines, S.J. 2 vols. Louvain: Nauwelaerts; Paris: J. Vrin, 1953. Pp. 415, 431. 260 Belgian francs.**

Father Troisfontaines served his apprenticeship in the existentialist field with two small publications: *Existentialism and Christian Thought* and *The Choice of J.-P. Sartre.* Both of these works were published in 1946, at a time when Sartre dominated the scene. Since then, the situation in France has changed. For whereas Sartre has failed to publish his promised work on man, Marcel has issued several important volumes. Even in his "Gifford

Lectures," *The Mystery of Being*, however, Marcel does not pretend to be giving a rounded synthesis of his thought. The question arises whether the thought of a nonsystematic philosopher can ever be restated in systematic form by someone else. There seems to be no good reason why this cannot be done. At least as far as other people are concerned, they can often gain a better understanding of a man's views by reading a systematic exposition than by confining themselves to the original piecemeal approach of the philosopher himself.

Fortunately, Marcel takes a sensible attitude toward this question. While still maintaining his personal refusal to construct a system, he is becoming increasingly aware of the distinction between the idealistic notion of a closed system and the realistic notion of an open system or synthesis. Troisfontaines's aim is to restate Marcel's thought in a systematic form that will nevertheless respect his polemic against systematic idealism. He gives a unified view of the various philosophical themes which Marcel himself scattered abroad in his many articles, conferences, and private journals. Good use is made not only of all the published writings but also of numerous unpublished manuscripts, extending from Marcel's earliest notes for his thesis down to his most recent lectures. Marcel co-operated by making these latter sources available. He has given high praise to the work for its clarity, precision, and comprehensiveness. It contains an exhaustive bibliography of his writings.

The sinuous argument is organized around the three cardinal doctrines of existence, objectivity, and being. As a lapidary formula for man's spiritual development, we may say that he passes from existence to being through the mediation of objective analysis. In Marcel's terminology, existence signifies the original given situation in which a man is placed. It is the prereflective set of conditions imposed upon us by the given reality of the world. And in historical terms existence refers to the technological forces shaping our civilization. Given this meaning for existence, it is easy to see why Marcel refuses to call himself an unqualified existentialist. We take our point of departure in existence; but the journey leads in the direction of being or a free, reflective participation in the reality of the world, oneself, other persons and God. Here the familiar Marcellian themes of communion, fidelity, and prayer are given prominence.

Perhaps the most original contribution of Troisfontaines is his examination of the intermediary stage of objectivity. Under this heading, Marcel includes scientific research and all reflective methods which treat beings in an objective way. Although Troisfontaines usually refrains from criticizing Marcel, he does take explicit and frequent issue with him on this point. What is at stake is the validity of scientific knowledge and of objectively

orientated philosophies, including Thomism. The criticism is that Marcel does not distinguish clearly between objectivity in the sense of rational analysis and in the sense of a definite rupture with freedom and the subjective values of being. The author observes that Marcel's philosophy is deliberately incomplete and that it demands completion precisely through a vindication of conceptual knowledge and demonstration through objectively known essences. In view of *Humani Generis*, Troisfontaines is careful to show that Marcel's doctrine is at least compatible with the "traditional" view of rational concepts, essences, and the way of objective demonstration. But the author does not undertake the more radical task of comparing Marcel's moral understanding of being and existence with a speculative metaphysical account of being as existent. Hence his defence of the Thomistic ways to God leaves unclarified the properly existential character of the demonstration.

VENANT CAUCHY, *Fordham University*

Philosophical Studies. **By Heinrich Gomperz. Ed. by Daniel S. Robinson. With a foreword by Philip Merlan. Boston: Christopher Pub. House, 1953. Pp. 287. $7.50.**

This is a posthumous collection of essays and papers by the son of the noted historian of Greek philosophy. The first chapter offers a short autobiography. The other chapters fall under three headings: (1) history of early Greek philosophy (chaps. i-viii), (2) studies in ethics (chaps. ix-xvi), and (3) epistemology (chaps. xvii and xviii).

There ranges throughout the entire biography a deep sense of humility, an integrity and sincerity which attract us to the man in spite of doctrinal differences. We find here none of the clichés and attitudes with which much of modern thought is imbued.

Reacting against his father's views, Gomperz believed that a historian should avoid treating ancient systems as forerunners of modern philosophy and science (p. 20). Much less is known about the early Greek thinkers than is usually supposed; hence the need for constructing hypotheses to unify the scattered elements of doctrine which have come down to us. Editors should exercise much caution in altering texts, since false emendations may result from misunderstandings (pp. 41-42).

The ancient Greeks were more preoccupied with infrequent but startling

events, such as eclipses of the sun, than with common though equally mysterious happenings (pp. 74-75). They sought to explain reality by "the use of certain definite thought-patterns" (biological, political, artistic, mechanical), which Gomperz defines as "phenomenon functioning as an explanatory analogy"; through analogy, the unfamiliar becomes familiar (p. 76).

In contrast to the piecemeal treatment of the pre-Socratic fragments so frequent in other historians, Gomperz attempts to find the doctrinal unity underlying the different opinions expressed in the fragments (cf. p. 79). He avoids giving the impression that the views of the pre-Socratics were hopelessly naive or childish; he stresses, whenever possible, the significance, the brilliance of the ancients even in the formulation of erroneous theories.

The author finds in the Pythagorean doctrines of transmigration and numbers "the same underlying attitude towards life and reality" (p. 49). In the chapter entitled "The Greek Conception of the State," he denies that individual freedom existed in the Greek city; he cites the trial of Socrates as evidence of the lack of regard for freedom in Greece (pp. 113-14). Elsewhere Aristotle is accused of rejecting Plato's *Republic* and *Laws* merely because the plans would not work, without "even a hint that they might be objectionable even if they were" conducive to the ends of the state (p. 115). It is difficult to imagine that Gomperz read the *Politics* carefully; indeed. Aristotle emphasizes the need for love and friendship in obtaining the end of civil society; he clearly points out that Plato's state would sanction unequal distribution of functions and rewards, employ means in opposition to the end, and contradict human nature (cf. Aristotle, *Politics,* II, c. 2-7). The chapter entitled "Plato's System of Philosophy" (pp. 119-24) traces the doctrine of Plato's seventh epistle in the earlier dialogues, thus showing that its teaching does not indicate a senile capitulation to Pythagoreanism: "Plato's system of philosophy is not propounded in his dialogues in so many words, but it underlies them at least from the time of the *Republic* onward" (p. 123).

The two parts dealing with ethics and epistemology are vastly inferior to the first part. The author's notion of freedom is vague enough to be compatible even with the strictest determinism (p. 161). However, he points out the evils and abuses which often hide under the cloak of freedom. He traces a very widespread conception of tolerance to a basically skeptic attitude; for him it would seem that tolerance is but a *modus vivendi* which should not imply any acceptance of the possible truth of an opponent's views (cf. pp. 150-51).

Professor Gomperz suggests well-intentioned but painfully superficial solutions to grave political and moral problems such as overpopulation, un-

employment, and poverty (cf. pp. 241-42 and *passim*). Observance of the precept "Love thy neighbor as thyself" would seem to require in his opinion that the living standards of energetic nations be brought down by sharing on an equal basis with everyone, even though in the last analysis the underprivileged nations would scarcely be better off as a result of this equalization.

The last two chapters are not too original; they outline what appears to be a Platonic epistemology expressed in the terminology of logical positivism (cf. p. 278). To sum up, the late Professor Gomperz' views on ethics and epistemology are somewhat negligible; but his studies in the history of Greek philosophy represent a truly significant and lasting contribution.

THOMAS D. LANGAN, *Institut Catholique, Paris*

The Individual and the State. **By Richard B. Ballou. Boston: Beacon Press, 1953. Pp. xxviii + 305.**

Educational Wastelands. **By Arthur E. Bestor. Urbana: Univ. of Illinois Press, 1953. Pp. 226.**

General Education and the Liberal College. **By William F. Cunningham, C.S.C. St. Louis: B. Herder Book Co., 1953. Pp. ix + 286.**

The Conflict in Education. **By Robert M. Hutchins. New York: Harper & Bros., 1953. Pp. 112.**

Higher Education and the Human Spirit. **By Bernard E. Melland. Chicago: Univ. of Chicago Press, 1953. Pp. viii + 204.**

On Education and Freedom. **By Harold Taylor. New York: Abelard-Schuman, 1954. Pp. 320.**

Five of these books constitute the latest attacks on the staggering problem of turning out of our schools a steady massive stream of clear-thinking, sensitive, well-informed, democratic citizens, fully prepared to pursue wisdom and live life to the full. These attacks do not succeed.

As do most such attempts, these divide roughly into two species. Melland, Taylor, and Ballou emphasize the importance of broadening the appreciative capacity of the students. Hutchins and Cunningham emphasize the importance of intellectual discipline. That the two demands are not incompatible and that a successful program must blueprint exactly a plan for achieving their integration becomes evident as one surveys these works. That none of these authors is ready to call for bids, or even to retain en-

gineers to draw the prints, is evidence of the complexity of the problem. This accounts for the futility of publishing broad statements which aid neither the educator (because of their generality) nor the philosopher (because they have not been thought through).

This remark fortunately does not apply to Historian Bestor's *Educational Wastelands*. He alone of this company has attempted to limit himself to one facet of the problem. The situation requires a brief statement of the intellectual purpose of liberal education as a basis of contrast with the anti-intellectualists who have, according to Bestor, gained control of contemporary education. But the book remains close to the very practical central problem: How banish "the marvelous trivia" which the "professors of pedagogy" and the ace administrators have pushed in place of the solid scholarship and disciplined accomplishments of genuine liberal education? Mr. Bestor demonstrates from first-hand experience the lengths to which "life-adjustment" educationists can go. He is expert at pinpointing the mental laziness and defeatism which he asserts are the root causes of this disaster. In answer to the problem he provides a set of well-thought-out, practical suggestions for breaking the legal and administrative stranglehold which he claims they have imposed on education. The suggestions which follow for returning education to the educated are worth the attention of every citizen and every scholar.

Ex-Chancellor Hutchins can be excused of the charge of garrulousness, but not of incompleteness. In his very brief essay, *Conflict in Education*, he discusses many more problems than he solves. Education, to be worthy of the name, must be solidly intellectual. It must be "education for wisdom." As usual, Mr. Hutchins is brilliant in pointing up the inadequacies of the suggested alternatives: "adjustment to our environment" (our mission on earth is to *change* our environment, not adjust to it); "meeting immediate community needs" (why yield to the meaningless pressures of society?); "instrument of social reform" (social reform can only proceed when intelligent education subjects society's palliatives to searching examination). Mr. Hutchins is very successful in showing succinctly that educational theory demands a definite concept of man and must be engineered in terms of the perfection of definite intellectual virtues. But two great unsolved problems cast a shadow over this essay: How find the *unity* required for wisdom? And how present such an education to the masses? "I fear that the University . . . is so far sunk in empiricism, specialism and positivism that we cannot look to it to repeat in our time the brilliant leadership of the (mediaeval) University of Paris" (p. 107). Hutchins' advice to a student in quest of a philosophy might be paraphrased, "Seek and expect not to find." To the problem of providing a sound and adequate education

for the masses, Hutchins only comments, "It *must* be done." With this no one can take issue.

Father Cunningham (Director of the Notre Dame faculty of education) answers the question of *what* with a rather unimaginative re-affirmation of the traditional liberal arts idea, and the question of *how* with a long, involved, and not very lucid examination of every phase of contemporary education, and seems to find an excuse for the existence of most of it. Odds and ends are changed. Honors programs and integrated courses are tacked on. Vocational training does not come off too badly. Everything from student government to organization of the president's council gets a glance. The result is a kind of desultory blueprint drawn, with a few changes, from the existing structure of a typical Catholic liberal arts college. Needless to say, some of the suggestions lack inspirational value, and a few are very definitely questionable.

An example of the latter is the suggestion that an undergraduate concentration in *theology* be offered to those who want it. This is a dangerous suggestion. The "queen of the sciences" demands an adequate "hand servant." Thorough philosophical preparation is not acquired in a dash of undergraduate courses. Theology, the most vulnerable of all the sciences, has up until now been relatively secure from the fatal superficial survey approach. To invite theological speculation from immature minds, equipped with wonderful-sounding phrases about personality and substance, primary and secondary, instrumental and principle causes, grace and free will, is to invite an increase of something Catholic education can do well without: dangerous, narrow, nominalistic dogmatism.

But if Hutchins and Cunningham have failed to develop an acceptable educational program out of a basically sound approach, then it must be said that the three "philosophers of appreciation" have been even less helpful to those who require a plan of action.

That is not to deny that each makes a very telling point. The capital suggestions that *are* made need to be incorporated into any educational philosophy if it is to be adequate.

Theologian Melland is the only one of our authors who carefully elaborates the philosophical position upon which his educational reasoning is based. And because he founds his argument for "the culture of the human spirit" on a kind of Bergsonian view of reality and consciousness, *Higher Education and the Human Spirit* is an attractive, alive insistence that education must develop our "appreciative consciousness." That education must be concerned with more than theorems, formulae, hidebound concepts, and carefully reconstructed dates is a point well taken; for indeed the integral, rich, dynamic whole of reality is not to be appreciated alone in

the destructive dismemberings of analysis. For profundity, analysis, yes; but for integrity, for life, for texture and tendency it must be appreciated whole. But while Dr. Melland is careful to maintain the indispensability of the intellect, one is left with the feeling that a more careful analysis of the exact relation of the intellect and sense, conception and feeling would have protected this essay from charges of irrationalism. Just as Bergson, reacting to the constructural completeness of the Hegelian universe, presented the finitude of material reality as an incomplete world making itself, and as Whitehead stressed the necessity of *feeling* the vectoral tendency of the evolving reality, so Melland as a corollary argues for the development in education of "receptivity to the datum under consideration on the principle that what is given may be more than what is immediately perceived, or more than one can think" (p. 63). There is lurking here some of the same distrust of a distorting, constructing intellect with which James and Bergson reacted to the Absolute Idea.

The results for education are very interesting. Dr. Melland suggests the development of sensibility through exposure to creative activity in works of art and literature under the guidance of those who themselves possess lively senses of appreciation. The ultimate goal of such a program should be the development of "religious sensitivity and discernment"—an appreciation of the human mind's ability to overleap limits in order to plunge to the heart of reality. Dr. Melland, too, expresses his concern over the problem of mass education for freedom. That the "culture of the human spirit" would work in the direction of freedom is fairly clear; but that Dr. Melland's program contains in it the principles for solving the problem raised by sheer numbers is less certain.

President Taylor's main contribution to this discussion is the insistence that attention to the individual student must be substituted for predetermined, rigid intellectualist educational programs. He singles out the plan Mr. Hutchins helped engineer at Chicago as an example of a program worked out in abstraction from the interests and desires of the individual. In the place of such programs Mr. Taylor would substitute an atmosphere of freedom in which both students and teachers could help determine what is to be taught. In such a program works of art would be approached only after the student's interest had been raised to a level that made the work come alive. Students would gain active aesthetic experience by working in the campus theater, or by painting, performing, music, and so on. Thus the world of ideas could be approached not as a museum to be covered in a given time, but as a seething, active world of real conflict, where problem and search, challenge, success and failure are understood as its genuine elements.

Mr. Taylor includes in this collection of essays, which he has entitled *On Education and Freedom,* a quite penetrating discussion of academic freedom viewed from a very liberal standpoint, one of the best statements I have seen. Nonetheless, the work as a whole suffers from the basic difficulties—generality and a lack of profundity, apparently the lot of most of these books.

Finally, Educator Ballou's book seems inappropriately titled. The title, *The Individual and the State,* might lead one to expect a learned treatise on political science. Instead one finds a rather popularized, extremely general statement of a naturalistic theory of education. Ballou is squarely in Taylor's camp. His main concern is with *motivation* in education. A course of education will only come alive for a student when he has been convinced that there is some definite, worthy purpose in his digesting and appreciating the matter at hand. Mr. Ballou is right in charging that educators of all times have, through impatience and a selfish concern for their own intellectual interests, forced inert ideas into the minds of very bored students.

Of all our authors Mr. Ballou is most guilty of attempting to attack too many large problems in too little space and with insufficient preparation. Personality education versus mass instruction; individualism versus cooperation under law; the nature and role of purpose and knowledge in education—these are critical problems deserving of more than general, passing comment.

VINCENT EDWARD SMITH, *University of Notre Dame*

A History of Modern European Philosophy. **By James Collins. Milwaukee: Bruce Pub. Co., 1954. Pp. viii + 854. $9.75.**

Teachers of philosophy in American Catholic colleges have long been awaiting a history of modern philosophy that would accomplish a two-fold objective: the inclusion of our new and revised estimates of a number of important figures in the period, such as Descartes, and the approach to the subject matter within a familiar, Thomistic frame of reference. For the period of European philosophy from Descartes and Bacon to Nietzsche and Bergson the need has been forcefully filled. In his present work, ranging through 848 pages of text, James Collins has enriched historians of modern philosophy with the best teaching instrument ever offered by an American.

The book is made up of nineteen chapters, beginning with a discussion on the nature and function of a history of philosophy. There is then a chapter

on the Renaissance followed by an introduction to the scientific outlook as formed by Bacon, Galileo, and Newton. Ensuing chapters treat Hobbes, Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume, Kant, Fichte, Schelling, Hegel, Schopenhauer, Comte, John Stuart Mill, Nietzsche, and Bergson. There are two chapters on Kant, as dictated by the importance of his epistemology on the one hand and his practical philosophy on the other; and there is a natural combination of Fichte and Schelling into a single chapter. Teaching aids of the book include footnotes, bold-faced summaries at the end of each chapter, bibliographies for each chapter which are generous in scope and subdivided into primary sources and studies about the philosophy in question, subheadings appearing in each chapter and listed in the table of contents, and a copious index likewise subdivided.

The approach to each thinker treated is made first through a biographical sketch. The philosophers are then presented in the natural unfolding of their own systems but with the comparisons and contrasts that help a reader both to gain insight into this or that philosophy and to organize his knowledge of all of them.

There is no Thomist in the United States more competent to write a history of modern European philosophy, and Collins draws, as usual, upon his immense background of bibliographical research. His references range through periodicals no less than books. With his audience in mind, he wisely cites translations when they are available. As usual, too, he is able to give a sympathetic presentation of philosophies quite foreign to his own. His Thomistic frame of reference will provide students with a friendly atmosphere as they struggle to understand modern philosophy and modern philosophers.

As to the reliability of Collins's report on the men he treats there can be little question; and, when there is, his own bibliography can come to his aid. Possibly his chapters on the Renaissance and on science leave something to be desired; but then, too, there has been so little work done on the original sources of this period that the writer of any textbook lacks the controls available in treating men like Descartes or Locke or Kant. This remains a truly remarkable book in its competence within a subject matter and in its clarity of presentation.

No doubt there will be teachers who will hesitate at the size of the book and at its price. As to the price, the book represents a valuable addition to the permanent library of students; it is something that they ought to keep for later reference in plotting their course through the modern world. Regarding the size of the book, it should be said that bulk in this case is not proportional to teaching time required in the classroom. It takes time and space to unroll in a clear and vital way an alien system of philosophy. This

is the kind of book which a student can be expected to read, with a great deal of profit, on his own. The presentation relieves the teacher of much of the explanation required where a book is less generous in its exposition.

There is no doubt that many, perhaps most, of our Catholic graduates have only the haziest notion of the secular world of ideas that will confront them at every hand. Collins's book, in this light, is not a luxury too big and too expensive for the Catholic student. It is a necessity. Collins has put all of us, teacher and student alike, in his debt.

VERNON J. BOURKE, *Saint Louis University*

Augustine to Galileo. The History of Science A.D. 400-1650. **By A. C. Crombie. Cambridge: Harvard Univ. Press, 1953. Pp. xv + 436. $8.00.**

Strangely enough, English readers are better supplied with histories of natural science in the Middle Ages than with surveys of the course of other disciplines in the period. Sarton, Haskins, and Thorndike have long been favorably known for their extensive studies of medieval science. Now A. C. Crombie has added a new survey to this impressive list. His *History* runs from the patristic period to the seventeenth century but places greatest emphasis on the later centuries, from the twelfth onward.

The problem of ordering the material (a very difficult one) has been handled by Professor Crombie by making a sixfold division: science up to the twelfth century; the advent of Greco-Arabic science to Latin scholars; science in the thirteenth century; technics and science throughout the period; criticism of Aristotle in the late Middle Ages; and the revolution in scientific thought in the early modern period. To each of these topics Crombie devotes a lengthy chapter. As a result of this division, the book stresses the continuity in development of human knowledge and skills in several of the most important and practical areas. The fourth chapter, on technology, is particularly valuable, studying advances in education and the liberal arts, agriculture, the mechanics of industry and architecture, applied chemistry, medicine, and surgery.

A defect of this arrangement is that the work of even the greatest medieval scientists is scattered throughout the book. If you wish to see what St. Albert did, for instance, you must make your own assembly of information, for Albert shows up in most chapters. Crombie's method makes it difficult to get what any one man did in medieval science, but it enables one to

follow clearly the growth of scientific knowledge in general. He makes careful use of original sources, including much manuscript material. There are places where interesting bits of information are not fully documented. Lynn Thorndike's critical review (*Speculum* XXIX [1954], 541-45) perhaps overstresses some of these omissions.

On the whole, this *History* has less to offer students of medieval philosophy than Crombie's fine study of Grosseteste (Oxford, 1953). The latter book pays more attention to the relation of philosophy to scientific methodology. Both books, however, point up the importance of commentaries on Aristotle's *Posterior Analytics* in the development of scientific method. It is to be hoped that Father J. R. O'Donnell will soon be able to bring out his critical edition of Grosseteste's *Commentary* on this work. Both of Crombie's books can be used to good advantage as supplementary readings for courses in medieval philosophy.

MARIANNE M. CHILDRESS, *Saint Louis University*

Plato's Modern Enemies and the Theory of Natural Law. **By John Wild. Chicago: Univ. of Chicago Press, 1953. Pp. ix + 259. $5.50.**

Natural Right and History. **By Leo Strauss. Chicago: Univ. of Chicago Press, 1953. Pp. ix + 327. $5.00.**

American Liberty and "Natural Law." **By Eugene C. Gerhart. Boston: Beacon Press, 1953. Pp. xi + 212. $3.00.**

As each of these books points out, present moral and political tensions have caused renewed interest in natural right and natural law. The American writer, seeking to establish a democratic view as a bulwark against totalitarianism, is most apt to turn to the "self-evident truth" of "unalienable rights." But how are we to interpret these rights, not in their past historical context, but as having relevance and significance for our contemporary body politic? Professors Wild and Strauss contend that any defense of natural law or natural right must recognize that philosophy in the full sense of the term is realizable. John Wild phrases the problem in terms of Plato and his modern enemies, who, in effect at least, deny the validity of philosophical inquiry. "Is philosophy really possible or is it a fantastic delusion? This is the basic issue between Plato and his modern enemies" (p. 17). Professor Strauss develops the same theme in terms of an analysis of the history of

natural right. "Radical historicism compels us to realize the bearing of the fact that the very idea of natural right presupposes the possibility of philosophy in the full and original meaning of the term" (p. 31). Since this thesis is precisely what Lawyer Gerhart will not admit, the quotation marks in his title are most appropriate.

The natural law which Wild defends is "a universal pattern of action, applicable to all men everywhere, required by human nature itself for its completion" (p. 64). By analysis the author arrives at five ontological principles which are required for a realistic theory of natural law: (1) the world is governed by a normative order embedded in the very being of its component entities; (2) each finite entity is marked by an intelligible or essential structure which determines its development in regular ways; (3) this structure includes an active factor of dynamism or tendency which urges it toward further existence not yet acquired; (4) if these concrete tendencies are to be realized, they must follow a general dynamic pattern, and this pattern is what is meant by natural law; (5) thus good and evil are existential categories—good, in the most general sense, is the realization of tendency, and it is good for an entity to exist in a condition of active realization;—evil is the lack of fulfilment; if an entity's basic tendencies are hampered and frustrated, it exists in an evil condition. (Cf. pp. 132-33 and 137.) With these criteria in mind, Wild shows that the doctrine of natural law does not originate with the Stoics but with Plato, who was the first philosopher to work out an exact and coherent theory of natural law. Before attempting any proof of this, however, the author defends Plato against the charge of being an enemy of freedom and democracy. The "modern enemies" are Warner Fite, Winspear, Crossman, Reinhold Niebuhr, Arnold Toynbee, and, above all, K. R. Popper in his *The Open Society and Its Enemies.* Wild concludes as the negative part of his thesis with a criticism of several current misconceptions of the theory of natural law.

Developing and applying the five-fold critique to the central tradition of natural-law philosophy, the author finds that this tradition rightly includes such thinkers as the early Stoics, Marcus Aurelius, Thomas Aquinas, Richard Hooker, Hugo Grotius, and Thomas Paine. Lying outside of this tradition are thinkers such as Hobbes and Locke, who, in spite of their deceptive use of some of the phraseology of natural law, do not actually belong in the realistic tradition. Finally, an examination of the Platonic and Aristotelian theories of natural law reveals that, despite basic philosophic differences, Plato and Aristotle are in fundamental agreement on the principles of practical philosophy.

The concluding section deals with natural law and some problems of contemporary ethics, such as the nature of value and obligation. By far the

most rewarding chapter is the one on tendency as the ontological ground of ethics, for here the author presents us with the problem of the revival of metaphysics. In a section on "metaphysical protocols and phenomenology" he gives the kind of analysis that a teacher of realistic metaphysics can assign in an introductory course with some hope that the student can understand and profit by it. The same may be said for the following sections on essence and existence and on active tendency. (This will not seem faint praise to anyone who has attempted to find meaningful "outside reading" for such a class.) Wild's presentation of active tendency as "not restricted to a single universal category as in certain branches of the Aristotelian and Thomistic tradition" but as "analogous in logical structure and [understandable] only by a proportional similarity" (p. 198) is brilliantly done. However, both this presentation and the preceding section on "essentialism vs. existentialism," as well as his development of the five-fold criterion of natural law, may cause the Thomistic reader to wonder whether Wild has the *proper* name in his title.

Describing current American social science as inclined to interpret the expressions of natural right as an ideal or a myth, Professor Strauss proposes that this view will not satisfy. We are obliged to look for a standard of reference by which we can judge the ideals of our own society as well as those of any other, and this we cannot do unless we possess a knowledge of natural right. If our ultimate principles have no other support than our arbitrary, and hence blind, preferences, then we must conclude in nihilism. If the liberal views the abandonment of natural right with relief because he believes that this rejection will allow for tolerance of every position, he arrives at a self-defeating position, for he has at least implicitly admitted a rational or natural right to reject or condemn all intolerant or all "absolutist" positions. Unfortunately, Strauss continues, the issue of natural right presents itself today as a matter of party allegiance. Behind the hostility lies the diversity of a teleological view of the universe versus a nonteleological view which modern natural science seems to impose, and an adequate solution to the problem of natural right cannot be found before this basic problem has been solved. Setting aside this problem, however, Strauss deliberately limits himself to that aspect of natural right which can be clarified within the confines of social science. This approach brings forth two basic grounds for the rejection of natural right, one in the name of history and the other on the basis of the distinction between facts and values.

Treating the rejection of natural right in the name of history, the author exposes historicism as a particular form of positivism. But the historicist view is self-contradictory or absurd, for we cannot see the historical character of "all" thought without grasping something transhistorical. A view allied to

historicism is that which holds that there are a variety of unchangeable principles of right which conflict with one another; substantially this is the position taken by Max Weber. For Weber, facts and values are absolutely heterogeneous, and this distinction necessitates the ethically neutral character of social science. The true reason for this insistence on ethical neutrality was Weber's belief that there cannot be any genuine knowledge of the Ought; all meaning, all articulation originates in the activity of the knowing or evaluating subject. Very few today are satisfied with his Neo-Kantianism, and Weber himself was unable to adhere consistently to it.

Professor Strauss finds the origin of the idea of natural right in the discovery of nature as distinct from convention. But this discovery is not the sufficient condition: all right might be conventional. And it seems that the answer which prevailed prior to Socrates was conventionalism. This view ultimately identifies the good with the pleasant, as Plato shows when he attempts to establish the existence of natural right. Classic natural right may be said to originate with Socrates insofar as he may be called the founder of political philosophy.

Classic natural right includes three types of natural-right teaching. The first, Strauss states, is the Socratic-Platonic-Stoic natural-right approach. For this type of justice exists only in a society in which everyone does what he can do well and in which everyone has what he can use well. Justice is identical with membership in such a society and devotion to it—a society according to nature. The Aristotelian natural-right doctrine holds that natural right is a part of political right and that all natural right is changeable. The Averroistic interpretation of this makes natural right depend on human institution but distinguishes it from merely positive right by its being based on ubiquitous convention. The Thomistic doctrine of natural right is expressed in terms of natural law. Strauss concludes, however, that this Thomistic view is inseparable not only from natural theology but from revealed theology. (His argumentation here is, to say the least, sketchy and inadequate. Cf. pp. 163-64.) The modern effort to go back to the classics was an effort directed to the freeing of the concept of natural right from dependency on theology, natural or divine. (And thus, Strauss might have noted, from metaphysics.)

The presentation of modern natural right is devoted to an analysis of Hobbes and Locke. In his critical examination of the latter, Strauss shows clearly the dilemma that Locke faced. Although he speaks of natural law in the traditional sense, Locke never develops an ethical code from it because he holds that natural law, to qualify as law, must be known as God's law and as having rewards and punishments in another life. But the knowledge of another life comes not from reason but from biblical revelation. Further-

more. Locke's entire political teaching is based on the assumption of a state of nature, which assumption is wholly alien to the Bible. Thus Locke departs from the traditional teaching on natural right and follows the lead given by Hobbes. In the state of nature there is no law of nature; there is innate natural right but no innate natural duty. The most basic of natural rights is that of self-preservation and happiness. This requires property, so much so that the end of civil society can be said to be the preservation of property. In society the unlimited acquisition of money or other wealth is conducive to the common good and public happiness. Locke's doctrine on property distinguishes his view not only from Hobbes' but from the traditional teaching on natural law as well.

The concluding chapter of this work is on the crisis of natural right and is devoted to an examination of Rousseau and Edmund Burke. For Rousseau, freedom, not rationality, is the specific distinction of man. The difficulties inherent in this view might have suggested a return to the premodern conception of natural right. Such a return was attempted by Edmund Burke. For him, civil society is the true state of nature. But in his emphasis on practical wisdom Burke disparages theory and especially metaphysics, and thus parts company with the Aristotelian tradition. This and other currents led to the erection of practice as the highest theme in philosophy, so that the philosophy of history became the new metaphysics and practice ceased to be practice proper; that is, concern with *agenda.* The revolts against Hegelianism on the part of Kierkegaard and Nietzsche, insofar as they now exercise a strong influence on public opinion, thus appear as attempts to recover the possibility of practice. These attempts, however, increase the confusion since they destroy, as far as possible, the very possibility of theory.

To turn from the suasive and sometimes intricate analyses of Wild and Strauss to the pseudo-reasoning of Gerhart makes the efforts of the last seem anything but serious or sincere. In an introduction by Roscoe Pound a few strawmen are weakly attacked. Gerhart's thesis is that of the opposition between the American view of democracy and the ecclesiastical authoritarianism of the Catholic Church. This theme develops like a "Western": the reader cannot possibly confuse the hero in white and the villain in black, and the outcome is never in doubt. Gerhart's documentation for the role of villain is taken in large part from *The Natural Law Institute Proceedings* of Notre Dame. Although he submits these references to distorted electicism, it might be remarked that some of the passages and articles in this series are to be regretted as misleading or erroneous. Perhaps this indicated that such an institute must be scholastically discriminating if it is not to cause more misunderstanding than enlightenment.

In his attempt to clarify "natural law" the author contends that there is no end of definitions given the term. But "natural law" does not mean the same thing to a lawyer that it does to "churchmen." To show this he turns to history. The Greek contribution to natural-law thinking was little more than the recognition of man's desire for justice. Gerhart's treatment of law in the Middle Ages shifts without notice to a consideration of positive law, particularly canon law. He dismisses Aquinas with the statement that "his ideas were not new" (p. 47). His "history" of the Renaissance and Reformation runs along the same level of scholarship. It was in the Age of Reason that "men began to believe that . . . the conduct of men and society were dependent on natural laws discoverable by the human intellect" (p. 63).

"When we Americans speak today of our 'natural' rights, we only make sense if we mean the rights of particular men and women at a particular time" (p. 72). Man's long struggle for liberty against authority has resulted in America in a victory for liberty. Religious authoritarianism would deprive us of this by its interpretation of the natural law. To Americans, natural law means individual freedom, whereas the papal theory of natural law supports only despotism. Gerhart's heroes are, of course, Locke and Holmes. "Holmes was too intellectually honest to pose as an interpreter or expounder of a universal law" (p. 131).

What, then, is left of the "unalienable rights" which we Americans defend? "There must be a final tribunal for deciding every question in the world. Americans to date have wished to keep this prerogative in the Supreme Court of the United States and ultimately in the people" (p. 140). (*This* is the way to escape the yoke of authority?) For "the insistence on 'absolute truth' or 'absolute principle' is radically un-English and un-American" (p. 149).

> The timid mind loves certainty. The courageous mind finds manly exhilaration, a tonic, in exploring farther and farther into the unknown. . . . We must fiercely oppose the idea that any man or group can set our American Constitution and laws aside on any pretext including the pretext of "natural law." Americans must constantly cherish that "sense of right," that Anglo-Saxon sense of decency and fair play, to which all philosophies and all religions can always contribute (pp. 152-53).

No further comment seems necessary.

EDWARD CALDIN, *Leeds, England*

The Aim and Structure of Physical Theory. **By P. Duhem. Tr. by Philip P. Wiener. Princeton: Princeton Univ. Press, 1954. $6.00.**

Causality in Natural Science. **By Victor F. Lenzen. Springfield, Ill.: Charles C Thomas, 1954. $3.00.**

Relativity and Reality. **By E. G. Barter. New York: Philosophical Lib., 1953. $4.75.**

Philosophico-scientific Problems. **by P. Henry van Laer. Pittsburgh: Duquesne Univ. Press, 1953. $3.25.**

The death of Pierre Duhem in 1916 at the age of fifty-five was a loss to Catholic scholarship that has not yet been made good, for he combined the gifts of a notable physicist with those of an original historian of science and was besides an indefatigable teacher. His work on thermodynamics has been incorporated into science, but it is his writings on the nature and origins of scientific method that are still seminal. In the last fifty years the historiography of medieval science has been revolutionized and the origins of scientific method pushed back from the Renaissance to the thirteenth century. This progress, summed up by Dr. A. C. Crombie in his recent book *Augustine to Galileo,* has been largely the work of American scholars; but the germ was to be found in Duhem's three volumes on Leonardo da Vinci and in his classic *Le système du monde,* of which five volumes have so far been published. Duhem's writings on the philosophy of science have likewise had their repercussions in contemporary discussion. The first of the books under review here is a translation of *La theorie physique* (first published in 1906), the most important account of his views on the nature of physical theories and their relation to metaphysical and theological statements. This book exerted a strong influence upon the Vienna circle, as one of its members who is now a well-known philosopher of science, Philipp Frank, has recently recounted in his *Modern Science and Its Philosophy.*

Duhem combined in himself an advocate of Thomist metaphysics, a believer in Catholic theology, and an exponent of a Positivist theory of science somewhat like that of Mach. He believed that a scientific theory was not an explanation but simply an economical description of the laws that had been found by experiment. "It is a system of mathematical propositions, deduced from a small number of principles, which aim to represent as simply, as completely, and as exactly as possible a set of experimental

laws" (*The Aim and Structure of Physical Theory*, p. 19). It gives no further insight into nature than is given by the laws themselves; it is simply a set of symbols which when interpreted yield these laws. Such a view of scientific theory leaves no room for models, such as atoms, electrons and waves, which are now generally regarded as essential to science. Duhem regarded them as mere concessions to the imagination. His analytical mind was repelled by Lord Kelvin's ideal of a mechanical model to explain every phenomenon; and in his reaction against this extreme view of the place of models in science he had no use even for the notion of atoms. Many philosophers of science now regard such models as not indeed replicas or exact copies of whatever exists in nature but as analogies, which, with the progress of science, are made gradually closer. For Duhem they bore no relation to scientific truth; they might even obscure it for a physicist accustomed, like himself, to algebraic abstraction (*ibid.*, p. 71).

Because he thus restricted physical theory to a mathematical symbolism which describes, without explaining, the empirical laws discovered by experiment, Duhem held that a physical theory by itself is neither true nor false; "it merely gives a more or less satisfactory picture of the laws it intends to represent" (*ibid.*, p. 285). This position is not unlike the Positivists', and Duhem was not afraid to say so (*ibid.*, p. 276). It enabled him to distinguish physics at once from metaphysics and from Catholic belief, for both of these are concerned with reality, whereas physical theory in his view is not. In this way he thought to disarm the mechanical materialism which in his day was one of the great intellectual obstacles to the conversion of scientists. An appendix to the present volume reproduces in translation a long article entitled "Physics of a Believer," in which this position is worked out.

It is plain that this book raises problems that are still important to Catholic scientists and philosophers. Great as is its historical importance in the development of twentieth-century philosophy of science, the book is equally useful in putting clearly before our minds some of the major contemporary points of controversy, though we shall probably differ from the author both on the nature of science and on the mode of reconciliation of science and Christian belief. The book is very readable; the style clear, if somewhat diffuse; and the translation, in general, good. Prince Louis de Broglie contributes an appraisal of Duhem's work in an interesting foreword.

It would seem to the present reviewer that scientific laws, theories, and models do constitute explanations of natural events and their interrelations, but explanations of a different kind from those of metaphysics (in which is included philosophy of nature). Scientific statements depend essentially on the *correlation* of factors; they are concerned with the factors in a situa-

tion that are invariably found together. For instance, an element such as gold always shows the same invariable set of properties; the statement that these properties are invariably associated (that is, the definition of the element) is one form of scientific law, which lies behind the description of chemical substances. Another form, much used in physical sciences, is exemplified by Boyle's law, which states an invariable relation between the pressure and volume of a given specimen of a gas; this is a functional relation, expressed in the form of an algebraic equation, PV = constant. Such statements can be used as explanations of natural properties or events, in that they relate the individual property or event to a general rule. The explanation of this can's having become rusty is that it is made of iron, which always rusts in moist air; the explanation of the resistance you feel when you pump up a bicycle tire is the law that the pressure of the air increases as the volume decreases. Lightning is explained because it is an instance of the laws of electrostatics; the tides are explained inasmuch as they are predicted by the theory of gravitation. These seem to be genuine explanations, *pace* Duhem. Yet they are quite different in type from explanations in terms of efficient causes—real agents exerting their powers—or of final causes. Explanations by the four causes, so familiar in Scholastic philosophy and theology, are outside the realm of science (except insofar as scientific explanations can perhaps be regarded as a restricted kind of formal cause). For brevity's sake we may refer to the scientific and metaphysical types as explanations by correlations and by causes respectively.

The word "causality" is unfortunately used in both connections. In Scholastic works it refers to the four Aristotelian causes; but in contemporary works on the philosophy of science it usually refers to correlation. This shift in the meaning of the term began with William of Occam in the fourteenth century, but its modern application is usually derived from Hume. Thus Professor Lenzen's book, *Causality in Natural Science,* is concerned with the correlation of factors and mainly with functional relations between variables (exemplified by Boyle's law). In a concise and lucid way he describes the use of functional relations in physical science and deals with the special difficulties raised by relativity, quantum theory, and submicroscopic physics. He gives some examples of similar explanations in biology, leaving open the question whether life can be completely explained in such terms. Most of the treatment avoids discussion of the ontological problem of causality, but the author's views on the elimination by scientific method of "animistic" views of nature, his reference to Comte's notion of progress from theology through metaphysics to science, and his exposé of Philipp Frank's conventionalist view of science suggest that he has little sympathy with explanations other than those by correlation.

That scientific correlations do not exhaust even physical reality is suggested by the special limitations on physical measurements implied by relativity and the quantization of energy. Relativity implies that an event cannot be observed at exactly the time it occurs, and this has curious consequences when the observer is moving relative to the system in which the event occurs. Quantization of energy implies that even the most delicate experimental probe disturbs to some extent the system under observation. Thus the mathematical theories which embody these limitations on experiment cannot be taken as the last word on reality. For instance, events on the atomic scale may not be predictable, but that does not imply that they are uncaused. Absolute simultaneity of events, again, may have no place in relativity theory, but it may yet occur in reality. It is not possible to equate "unobservable" with "nonexistent." This is argued, as far as relativity is concerned, in Mr. Barter's book, which protests from a realist philosophical position against identifying mathematical theories with reality. The book is clearly written and the argument can be followed without a technical knowledge of physics.

In developing the philosophy of science, Thomists have not, unfortunately, been at all prominent; and current Thomist presentations of the philosophy of nature are not commonly very impressive. The reason is no doubt that men trained in both science and philosophy are very rare. One attempt to fill this gap—which in a science-conscious age is deplorable—is the recent foundation at Chicago of the Albertus Magnus Lyceum, where scientists and Thomists can meet and collaborate. But the most impressive work yet published in English, if we exclude Maritain's pioneering treatment in *The Degrees of Knowledge*, comes from two Dutch professors, Dr. A. van Melsen and Dr. P. van Laer, each of whom is trained both in science and in philosophy and has recently lectured as visiting professor at Duquesne University. Dr. van Melsen in his *The Philosophy of Nature* (1953) distinguishes that discipline very clearly from natural science, showing the different types of question that engage philosophers and scientists; and in *From Atomos to Atom* he showed how the Greek concept of the atom was developed to deal with quite different problems from the modern physical atomic theory. Dr. van Laer in the book under review is equally firm in distinguishing the two types of question and in maintaining the integrity of the methods of the two disciplines. His science is genuine up-to-date science; his Thomism is scholarly, clear-headed, and independent; and the two are kept in relation though distinct.

Some of the essays translated and collected in this book are primarily philosophical, such as the acute discussions of the logical Positivists' principle of verification and the paper advocating extension as the distinguishing

characteristic of matter. The longest chapter is on the possibility of action at a distance in such phenomena as gravitation; it turns partly on the application of metaphysical principles to experimental results and partly on the philosophical question of localization; the conclusion, expressed with becoming reserve, is that there is no action at a distance. Four other chapters are concerned more specifically with the philosophical problems of scientific method—the status of scientific explanation, the relation between science and mathematics, the place of causality and determinism in nature, their distinction from predictability, and the relation of finality to scientific law. It is impossible to summarize these essays in a brief review; one can only commend them to the attention of both scientists and philosophers, who will alike find Dr. van Laer to be a man of their own temper. He has put us greatly in his debt and we look forward to the publication of his promised book on the philosophy of science.

ARMAND MAURER, C.S.B., *Pontifical Institute of Mediaeval Studies*

André Marc, s. j., *Dialectique de l'affirmation. Essai de métaphysique réflexive.* "Museum Lessianum," section philosophique 36. Paris, Desclée de Brouwer; Bruxelles: L'édition universelle, 1952. Pp. 731.

This volume on general metaphysics is a worthy successor of Father Marc's two previous works, *L'idée de l'être chez saint Thomas et dans la scolastique postérieure* and *Psychologie réflexive.* It continues and amplifies their philosophical analyses on the same high level. *L'idée de l'être* was devoted to an examination of the notion of being. In his new work, Father Marc deepens that examination and extends it to the transcendentals and categories. The dialectical movement of his *Psychologie réflexive* began with the being of man and mounted to being in general. In the present work, the movement of dialectics is in the opposite direction. Beginning with being itself, the various levels of being are located in relation to it as branches stemming from a single trunk (p. 336).

The plan of the book reveals the details of this general movement. After the introduction, which deals with the object and method of metaphysics, Book I considers the idea of being (chap. 1) and its transcendental properties: unity (chap. 2), truth (chap. 3), goodness (chap. 4), and beauty

(chap. 5). Book II is concerned with the divisions of being. Following an examination of analogy (chap. 1), successive chapters deal with movement (chap. 2), efficient causality (chap. 3), finality (chap. 4), essence and existence (chap. 5), and possibility (chap. 6). Book III is devoted to the categories and related topics: substance (chap. 1), individuation (chap. 2), personality (chap. 3), being and action (chap. 4), and relation (chap. 5).

The author conceives the task of the metaphysician to be that of going beyond the antinomies and oppositions encountered in reality and thought to a vantage point which enables him to transcend them. He is initially faced with antinomies, such as the one and the many, act and potency, existence and essence, necessity and contingency. His method of dialectics, by which he passes from one to the other, enables him to surmount these oppositions by relating them to a unique principle in which all contrariety disappears. The one is seen as ontologically prior to the many, act to potency, existence to essence, person to the material individual. The supreme unity of being is found to be the perfection of act, of existence, and of personality; namely, God.

In brief outline, this is the journey Father Marc takes the reader on through the seven hundred pages of his book. The metaphysical positions which he adopts on the way are not presented as original. The originality of the book lies rather in its analysis of the dialectic and reflexive method which it attributes to metaphysics and in its manner of linking together the principal metaphysical notions (p. 10). The basic inspiration of St. Thomas is acknowledged (*ibid.*), but other Scholastics of the Middle Ages and modern times are called upon to throw light on the issues. A good deal of space is also devoted to the ideas of modern French philosophers outside the Scholastic fold, such as O. Hamelin, Gabriel Marcel, Louis Lavelle, and René Le Senne. In this way the author hopes to institute a dialogue between Scholastic and modern philosophers to their mutual benefit.

While this aim is excellent in itself, there is always the danger that, in the desire to bring divergent views together, clear-cut differences will be blurred and confused. Father Marc, like so many before him, has not entirely avoided this danger. For example, he rejects idealism; and yet in his dialogue with idealists or those with idealist tendencies, he sometimes uses their language. The role of the concept is said to be that of dominating and ordering the sensible world (p. 129). Abstraction is the actualization of knowledge, beginning with sensible data (p. 128). The mind attempts to dominate reality (p. 19). Thinking is unifying, the

ordering of the singular with respect to the universal (p. 130). Metaphysics is the "form of thought in general" (quoted from Dunan, p. 30). These are surprising statements in a book whose inspiration is said to be Thomistic.

Father Marc's conception of the method of metaphysics as "reflexive" is also difficult to reconcile with that of St. Thomas. He points out that, according to St. Thomas's commentary on the *De Trinitate,* q. 6, a. 2, the judgment of the metaphysician terminates in the intellect, while those of the mathematician and philosopher of nature terminate, respectively, in the imagination and senses. He concludes that the method of metaphysics is introversive, in contrast to the methods of mathematics and physics, which are extroversive, pointed to space and the sensible world. The metaphysician, then, will find "authentic being" only by a reflexive activity of the spirit, turning inward upon itself (pp. 45 and 46). Metaphysics must use a psychological reflexive method to study the laws of being as such (p. 43).

It is true that, according to St. Thomas, the metaphysician finds the evidence for his judgments about being in the light of what the intellect presents about it and not in the light of the imagination or senses. Moreover, he achieves a high degree of self-awareness, especially in his study of such aspects of being as truth and beauty. But this does not mean that his method is essentially a reflexive grasping of the mind's own activities, even as intentionally containing reality.

Father Marc asserts that St. Thomas does not tell us what the method of metaphysics is (p. 41). This is true of the article he cites, but not of the one preceding *(In Boeth. de Trin.,* q. 6, a. 1). There the method of this science is described as *intellectus.* An examination of the profound meaning of this term in St. Thomas's philosophy would have enriched the discussion of the method of metaphysics. The same can be said of St. Thomas's doctrine of *compositio* and *resolutio* (synthesis, analysis—which the author says were not explicitly contrasted in the Middle Ages, p. 142).[1]

This book, however, is not to be judged primarily on its understanding of, and adherence to, the *littera* of St. Thomas. While it is deeply inspired by the Angelic Doctor, it is not intended as an exposition of St. Thomas's metaphysics as a historically determined doctrine. It is a profound personal reflection on metaphysics with the help of the history of philosophy. As such, it is highly recommended.

[1]Cf. the excellent study of L. M. Régis, O.P., "Analyse et synthèse dans l'oeuvre de saint Thomas," *Studia Mediaevalia in Honorem . . . R. Martin* (Bruges, 1948), pp. 303-30.

BIBLIOGRAPHY OF CURRENT PHILOSOPHICAL WORKS PUBLISHED IN NORTH AMERICA

For the purposes of this bibliography, "philosophy" will be understood in a very broad sense. It will include works in other fields—such as sociology, aesthetics, and politics—that involve philosophical principles and problems.

"Current" books will be understood to include new books, revised editions, and reprints if the previous printing had been out of stock for a notable period of time, or if there is a notable difference in price, format, and the like.

The procedure is as follows:

1. *Books announced for publication will be listed in the issue which next appears after the announcement is received.*
2. *Books actually published will be listed in the subsequent issue, even though they were already listed in accordance with No. 1 above.*
3. *Books received by* The Modern Schoolman *will be listed with full bibliographical information and a descriptive and/or critical note in the subsequent issue, even though they were already listed in accordance with No. 1 and/or No. 2. This will be done even if a full review is to appear later.*

Allport, Gordon W. *Becoming.* New Haven: Yale Univ. Press; March, 1955. $2.75.

Anderson, John M. *The Individual and the New World.* State College, Pa.: Bald Eagle Press, 1955. Pp. vi + 202. $4.00.

This book is an attempt to write a distinctively American philosophy of nature and of man. The author selects incidents from American life which seem to him to be distinctive, such as the frontier, and studies the writings of men like Franklin, Jefferson, Whitman, Miller (the Shaker), Mark Twain, Henry Adams, Thoreau, Emerson, Calhoun, Royce, and Dewey. He concludes that in a distinctively American philosophy man is conceived as free, that this freedom arises as a gift from an unknown world faced without fear but also without commitment, and that freedom is supported by the human community.

Aristotle. *Rhetoric.* Tr. from the Greek by W. Rhys Roberts; *Poetics,* tr. from the Greek by Ingram Bywater. New York: Modern Lib., 1954. Pp. 311. $1.45.

Ashley-Montagu, Montague Francis. *Immortality.* New York: Grove Press, 1955. Pp. 72. $2.50; paper, $1.00.

Berkeley, George. *Three Dialogues between Hylas and Philonous.* Ed. with an introd. by Colin M. Turbayne. New York: Liberal Arts Press, 1954. Pp. xxx + 113. Paper, 75¢

The *Three Dialogues* provide a simple and interesting introduction to Berkeley's philosophy. The editor's introduction clearly outlines the purpose of the work and the various arguments used in it. This is a convenient, helpful, and very reasonably priced edition.

Blanshard, Brand. *On Philosophical Style.* Bloomington: Indiana Univ. Press, 1954. Pp. 69. $1.00.

Brandt, Richard B. *Hopi Ethics.* Chicago, Univ. of Chicago Press. Pp. 408. $7.50.

Case Against Communism, The. Washington, Public Lib. of the District of Columbia. Paper, apply.

CLAGETT, MARSHALL. *Greek Science in Antiquity.* New York: Abelard-Schuman; May, 1955. $4.75.

CLARK, W. E. LE GROS. *The Fossil Evidence for Human Evolution.* Chicago: Univ. of Chicago Press; March, 1955. $6.00.

COLEMAN, JAMES A. *Relativity for the Layman.* New York: William-Frederick Press, 1954. Pp. 131. $2.75.

This book is intended to be a simplified account of the history, theory, and proofs of relativity. In many ways the author succeeds well. He tries to explain the nature of scientific method and proof, and in this he is somewhat less successful, principally because he seems to take science as the only form of knowledge.

CONGAR, YVES, O.P., and OTHERS. *Tolerance and the Catholic: A Symposium.* New York: Sheed & Ward; April, 1955. $4.50.

COOK, THOMAS IRA, and MOOS, MALCOLM CHARLES. *Power through Purpose.* Baltimore, Johns Hopkins Press. Pp. 216. $4.00.

COULSON, C. A. *Science and Religion.* New York: Cambridge Univ. Press, 1955. Pp. 35. Paper, 50¢

CROSSER, PAUL K. *The Nihilism of John Dewey.* New York: Philosophical Lib., 1955. Pp. xi + 238. $3.75.

This is a study of John Dewey's philosophy, singling out three major points: the theory of science and of art, and the philosophy of education. The author argues that Dewey is an extreme relativist. He attempts to show that the Deweyian theory leads to a dissolution of the objects of science and art, and a degradation of the cognitive and aesthetic functions. Unfortunately, the style of the book is highly involved and employs derogatory terms too often. The author's case is based on extensive quotation and on an argument that is often sound.

DANTE ALIGHIERI. *The Divine Comedy.* The Carlyle-Wicksteed translation from the Italian. New York, Modern Lib. Pp. 646. Paper, 95¢

DANTZIG, TOBIAS. *Mathematics in Retrospect. The Bequest of the Greeks.* New York: Chas. Scribner's Sons; May, 1955. $4.50.

DE RAEYMAEKER, LOUIS, and OTHERS. *Truth and Freedom.* Tr. by Henry J. Koren, C.S.SP. "Duquesne Studies," Philosophical Series, Vol. v. Pittsburgh: Duquesne Univ. Press; Nauwelaerts, 1954. Pp. vii + 133. $3.00; paper, $2.25.

This is an excellent English translation of *Verité et liberté*, previously reviewed in THE MODERN SCHOOLMAN, XXXII (March, 1955), 271.

DE SANTILLANA, GIORGIO. *The Crime of Galileo.* Chicago: Univ. of Chicago Press; March, 1955. $5.75.

DILTHEY, WILHELM. *The Essence of Philosophy.* Tr. from the German by Stephen A. Emery and William T. Emery. Chapel Hill, Univ. of North Carolina Press. Pp. 89. $2.50; paper, $1.50.

DONCEEL, J., S.J. *Philosophical Psychology.* New York: Sheed & Ward; March, 1955. $4.50.

DULLES, AVERY, S.J.; DEMSKE, JAMES, S.J; and O'CONNELL, ROBERT, S.J. *Introductory Metaphysics* New York: Sheed & Ward; March, 1955. $4.50.

EARLE, WILLIAM A. *Objectivity.* New York: Noonday Press; August, 1955. $3.75.

EASTMAN, MAX. *Reflections on the Failure of Socialism.* New York: Devin-Adair Co., 1955. $2.75.

EDEL, ABRAHAM. *Ethical Judgment. The Use of Science in Ethics.* Glencoe: Free Press; March, 1955. $5.00.

EDMAN, IRWIN. *John Dewey.* "Makers of the American Tradition Series." New York: Bobbs-Merrill; April, 1955. $3.00.

EDWARDS, PAUL. *The Logic of Moral Discourse.* Introd. by Sidney Hook. Glencoe: Free Press; May, 1955. $4.00.

Evans, Joseph W., and Ward, Leo R. (eds.). *The Social and Political Philosophy of Jacques Maritain.* New York: Chas. Scribner's Sons; May, 1955. $5.00.

Fremantle, Anne. *The Age of Belief: The Medieval Philosophers.* New York: New American Lib. of World Literature, 1955. Pp. 224. Paper, 50¢

This book, subtitled *The Medieval Philosophers,* contains selections from St. Augustine, Boethius, Scotus Erigena, St. Anselm, Abelard, St. Bernard, Avicenna, St. Bonaventure, St. Thomas Aquinas, Duns Scotus, William of Ockham, and others (represented by briefer selections). In general, the author has chosen existing translations.

The author has supplied an introduction and a running commentary weaving the passages together. She makes an effort to show the "modernity" of the problems treated and to express the philosophy in striking prose. It would have been better if the same concern had been shown for the historical position of the problems and for the philosophical accuracy of the commentary.

Fulton, James Street. *Science and Man's Hope.* New York, Bookman Associates. Pp. 179. $3.25.

Ganss, George E., s.j. *Saint Ignatius' Idea of a Jesuit University.* Milwaukee: Marquette Univ. Press, 1954. Pp. xx + 368. $5.50.

This is a study of the educational ideas and practices of St. Ignatius Loyola in themselves and in relation to the social and cultural milieu. There are three appendices—on the teaching of Latin, on the methods of the teaching of philosophy and theology, and on general education. The second part of the book is a translation, with introduction and notes, of Part Four of the Constitutions of the Society of Jesus. This is a detailed, careful, well-annotated study. There is a bibliography and a very useful index.

Garnett, A. Campbell. *Religion and the Moral Life.* New York: Ronald Press Co., 1955. Pp. viii + 223. $3.20.

This is a serious and in many ways remarkable study in the philosophy of religion. The author holds that the theistic view has definite advantages over atheism, secularism, and humanism. He holds that the best of theistic views is the Christian. He interprets faith as commitment, not as an intellectual act; he holds that God is both immanent and transcendent, in a position that he likens to panentheism; he considers most Christian creeds and traditions as accretions. In his analysis of faith and reason, he maintains that faith is based on experience and selects moral experience as the common basis.

Gilson, Etienne. *History of Christian Philosophy in the Middle Ages.* New York: Random House, 1955. Pp. xvii + 829. $7.50.

The author's earlier *La philosophie au moyen âge* had long prompted many eagerly to wish for an English version. In the present book, the eminent scholar has done more: it is entirely a new work, more comprehensive, with a unified theme (which, however, does not minimize the astounding variety of doctrines) and a documentation of almost overwhelming completeness. Pages 552 to 804 are notes (8 on 9 point), mostly bibliographical but sometimes also informative and argumentative; thus, for example, the essential data of an author's life are relegated to the notes, where they do not interrupt the consideration of ideas. Similarly, details of doctrine, interesting but not essential information, and discussions of historical interpretations of various points are to be found in the footnotes.

This book will be most useful to advanced students as well as to scholars in the field of medieval thought.

Gregg, John R. *The Language of Taxonomy.* New York: Columbia Univ. Press, 1954. Pp. xi + 71. $2.50.

HARDING, WALTER (ed.). *Thoreau.* Dallas, Southern Methodist Univ. Press. Pp. 215. $3.75.

HARRIS, SEYMOUR. *John Maynard Keynes. His Economic Theories and the Way He Applied Them.* New York: Chas. Scribner's Sons, 1955. Pp. 240. $3.00.

HASTINGS, CECILY, and NICHOLL, DONALD (eds.). *Selection II.* New York: Sheed & Ward, 1954. Pp. 221. $3.50.

HAWKINS, DENIS JOHN BERNARD. *Being and Becoming.* New York: Sheed & Ward, 1954. Pp. 176. $3.00.

HEGEL, G. W. F. *Lectures on the History of Philosophy.* Tr. by E. S. Haldane and F. H. Simson. New York: Humanities Press, 1955. 3 vols. $14.50.

HOEBEL, EDWARD ADAMSON. *The Law of Primitive Man.* Cambridge: Harvard Univ. Press, 1955. Pp. 366. $5.50.

International Communism—Its Teachings, Aims, and Methods—Know Your Communist Enemy 1. Washington: Government Printing Office, 1954. 10¢

JEFFERSON, THOMAS. *The Political Writings of Thomas Jefferson.* Ed. with an introd. by Edward Dumbauld. New York: Liberal Arts Press, 1955. Pp. 246. $2.25; paper, 90¢

[JOHN OF ST. THOMAS] *The Material Logic of John of St. Thomas. Basic Treatises.* Tr. by Yves R. Simon, John J. Glanville, and G. Donald Hollenhorst. Preface by Jacques Maritain. Chicago: Univ. of Chicago Press, 1955. Pp. xxxiv + 638. $10.00.

The treatises selected for translation from the *pars materialis* of the *Logica* deal with the object and nature of logic, the universal, the antepredicaments, the categories (including substance, quantity, relation, quality), signs and concepts, demonstration and science. The notes (pp. 587-625) sometimes give references, sometimes are the notes of the author himself (and are thus identified) but most often are explanations of terms or doctrines.

The translation is careful and smooth. The translators have aided the reader by identifying the references of the author in relation to modern notation and to modern editions. There is a detailed table of contents and indices of names and of subjects. Professor Simon has contributed an enthusiastic foreword (pp. ix-xxiii), in which he explains what is meant by "material logic" (pp. ix-xiii). The discussion of "dialectic" (pp. xiv-xvi) should be singled out for consideration by anyone who is of a mind to use these treatises.

The book is printed by offset from typed material and, though nicely bound, is excessively high priced.

JOSEPH, N. BENEDICT, O.P. *The Virtue of Observance according to St. Thomas Aquinas.* Washington: Thomist Press, 1954. Pp. 82. Paper, $1.00.

This is a study of the virtue of "observance," or of treating others with the honor and respect that is due to them because of their personal excellence and position. After a brief historical survey, the author studies what this virtue has in common with other virtues, then its distinctive features, and finally its "parts."

KIRK, RUSSELL. *Academic Freedom.* Chicago: Henry Regnery Co.; March, 1955. $3.75.

KLUBERTANZ, GEORGE P., S.J. *Introduction to the Philosophy of Being.* New York: Appleton-Century-Crofts; May, 1955. $2.75.

KNODE, JAY CARROLL. *An Intellectual Primer.* New York: Philosophical Lib., 1955. Pp. 88. $2.50.

Leibniz: Philosophical Papers and Letters. Tr. and ed. with an introd. by Leroy E. Loemker. Chicago: Univ. of Chicago Press; May, 1955. 2 vols., each $6.50; set, $12.50.

LIPPMANN, WALTER. *The Public Philosophy.* Boston: Little, Brown & Co., 1955. $3.50.

LOCKE, JOHN. *Essays on the Law of Nature.* New York: Oxford Univ. Press, 1954. Pp. 303. $5.60.

MANDELBAUM, MAURICE. *The Phenomenology of Moral Experience.* Glencoe: Free Press; March, 1955. $5.00.

MARCUSE, HERBERT. *Reason and Revolution.* 2d ed. New York: Humanities Press, 1955. Pp. 451. $5.00.

MARITAIN, JACQUES, and MARITAIN, RAÏSSA. *The Situation of Poetry.* Tr. by Marshall Suther. New York: Philosophical Lib., 1955. Pp. x + 85. $2.75.

The first two essays, by Raïssa Maritain, deal with sense and nonsense in poetry and with the relations between magic, poetry, and mysticism. The third and fourth, by Jacques Maritain, deal with poetic knowledge and poetic experience. Though M. Maritain has taken up these points again in his later writings, this early book has not been superseded. In view of the importance of the element of nonconceptualizable knowledge in his later theories, what is said in these studies is very illuminating.

There is no index.

MEERLOO, JOOST ABRAHAM MAURITS. *The Two Faces of Man.* New York, International Univ. Press. Pp. 247. $4.00.

MELZER, JOHN HENRY. *Philosophy in the Classroom: A Report.* Lincoln: Univ. of Nebraska Press, 1954. Pp. vii + 192. Paper, $2.50.

This report summarizes the results of a questionnaire on the teaching of philosophy, with 288 teachers reporting. The first part of the book deals with the content of philosophy courses and takes up the courses in logic, introduction to philosophy, ethics, history of philosophy, and aesthetics in some detail. The second part takes up related problems—of curriculum, class preparation, student-professor relations, grading, testing, attendance, use of time, professional ethics, and advancement. A student planning a career in the teaching of philosophy might derive much benefit from this report from the field.

MORGAN, M. C. *Freedom and Compulsion.* New York: St. Martin's Press, 1954. Pp. 344. $3.50.

This is a brief history of Europe from 1789 to 1939. The author takes as his theme the gain or loss of liberty and thereby often engages in philosophical discussions. He seems to regard liberty as an unqualified good, though at other times he commends measures on the sole ground that they were successful. The book is well written.

MORRIS, CHRISTOPHER. *Political Thought in England.* New York: Oxford Univ. Press, 1954. $2.00.

MOSSNER, ERNEST CAMPBELL. *The Life of David Hume.* Austin, Univ. of Texas Press. Pp. 703. $7.50.

MUNK, ARTHUR W. *History and God.* New York: Ronald Press Co., 1955. Pp. 310.

Natural Law and Natural Rights. Ed. by Arthur L. Harding. Dallas: Southern Methodist Univ. Press; March, 1955. $3.00.

NIEBUHR, REINHOLD. *The Self and the Dramas of History.* New York: Chas. Scribner's Sons; April, 1955. Pp. 244. $3.75.

PATTERSEN, ROBERT LEET. *Irrationalism and Rationalism in Religion.* Durham: Duke Univ. Press, 1954. Pp. 155. $3.00.

PETRAZHITSKY, LEON. *Law and Morality.* Tr. by Hugh W. Babb. Introd. by Nicholas S. Timasheff. Cambridge: Harvard Univ. Press, 1955. $7.50.

PIEPER, JOSEF. *Justice.* New York: Pantheon Books; April, 1955. $2.75.

PLATO. *The Republic.* Tr. from the Greek by B. Jowett. New York: Modern Lib., 1955. Pp. 397. Paper, 95¢

PORTNOY, JULIUS. *The Philosopher and Music.* New York: Humanities Press, 1955. Pp. xv + 268. $4.50.

This book is mainly a history of philosophies of music, from the Greeks to modern times. The last chapter presents the author's aesthetics. The historical chapters give much interesting detail of fact and theory, but are not conspicuous for the insight they show. The author's personal theory is said to be rooted in humanism, which he explains as philosophic naturalism—the denial of the supernatural, of realism, of absolute truth, and the affirmation of some rationality as opposed to romantic emotionalism.

Preliminary Report on Neo-Fascist and Hate Groups. Washington: Government Printing Office, 1954. 15¢

RITTER, WILLIAM EMERSON. *Charles Darwin and the Golden Rule.* Comp. and ed. by Edna Watson Bailey. New York, Storm Publs. & Science Service. Pp. 421. $5.00.

ROBLES, OSWALDO. *Freud a Distancia.* Introd. by Honorio Delgado. Mexico City: Editorial Jus, 1955. Pp. 267.

This work is an attempt to evaluate critically the contributions of Freud. The author bases his study on primary sources, on the Freudian writings and the orthodox commentators. In this study, he distinguishes between Freudian method and contributions to psychiatric methods (which have been far-reaching and widely accepted) and Freudian philosophy (which is materialistic, evolutionistic, naturalistic, and instinctual). Theoretical psychology, as a distinct area of contribution, is not considered.

ROLLER, DUANE EMERSON, and ROLLER, DUANE HENRY DUBOSE. *The Development of the Concept of Electric Charge.* Cambridge: Harvard Univ. Press, 1954. Pp. 101. Paper, $1.60.

ROOS, H., S.J. *Søren Kierkegaard and Catholicism.* Tr. by Richard M. Brackett, S.J. Westminster: Newman Press, 1954. Pp. xx + 62. Paper, $1.25.

This was a lecture delivered to the Søren Kierkegaard Society in Copenhagen. The author shows that Kierkegaard had only a fragmentary and indirect knowledge of Catholic thought. He finds both Catholic tendencies and anti-Catholic tendencies. Among the Catholic tendencies are the critique of Lutheranism, the stress on the value of action, something like an analogy of being, and some insistance on the need for objective authority. Among the anti-Catholic tendencies are the "subjectivity" of faith, the stress on the paradox as absurd, and a rejection of the idea of the Church on the ground that it gets between man and God.

The translator has done an excellent job with the text. In the quotations he has given the translations of already published editions wherever possible and in the notes has referred to the English translations as well as to the original Danish where possible. There is also a list of all the works of Kierkegaard translated into English.

ROYCE, JAMES E., S.J. *Personality and Mental Health.* Milwaukee: Bruce Pub. Co., 1955. Pp. xiv + 352. $3.50.

This book deals with the structure and development of personality, its management (control), its disorders and their causes, care, and prevention. As far as psychological theory is concerned, the author is not a narrow follower of any of the prevalent schools but selects and harmonizes elements drawn from diverse sources. The book is well written, and there are copious well-chosen suggestions for further readings.

This book is easily harmonized with the Thomistic philosophy of human nature; perhaps it is a defect that it often uses philosophical positions and

arguments as if they were of the same order as the experimental and theoretical statements of scientific psychology.

Russell, Frederick Arthur, and Russell, Arthur William. *Human Society in Ethics and Politics.* New York: Simon & Schuster, 1955. Pp. 248. $3.50.

Science and Freedom. Report of the Hamburg Conference on Science and Freedom. Boston: Beacon Press, 1955. $4.50.

Snyder, Louis Leo. *The Age of Reason.* New York: Van Nostrand, 1955. Pp. 185. Paper, $1.25.

Spencer, Herbert. *Social Statics.* New York, Robert Schalkenbach Found. Pp. 446. $5.00.

Thomas Aquinas, St. *Summa Theologiae.* Pars I. 2d ed. Ottawa: Commissio Piana, 1953. Pp. lxiv + 709 + 1* + 18.

Volume I of this excellent edition has been out of print for several years. As all those who have used it know very well, the edition is an unsurpassed bibliographical tool as well as an edition that offers a good text (the Piana text with the Leonine corrections). The present new edition corrects the printers' errors of the first.

Timasheff, Nicholas Sergeyevitch. *Sociological Theory.* New York: Doubleday. Pp. 343. $4.50.

Tulane Studies in Philosophy. Vol. III. "A Symposium on Kant." New Orleans: Tulane Univ. Bookstore, 1955. Pp. 161. Paper, $2.00

This volume consists of seven papers on Kant. Edward G. Ballard considers Kant's solution to the problem of man and nature. Richard L. Barber examines Kant's two classifications of modal judgments. James K. Feibleman tries to evaluate Kant's view on metaphysics. Carl H. Hamburg compares Kant and Cassirer on the concept of space. Harold N. Lee rejects the rigidity of Kant's categories and offers instead the notion of arbitrary organizational concepts. Louis Nisbet Roberts comments on the judgment of taste. Robert Whittemore isolates the foundations of the various formulations of the moral argument for the existence of God.

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INDEX TO VOLUME XXXII

ARTICLES

ARDLEY, G. W. R. Prolegomenon to Any Natural Science Which Can Be Called Philosophical 101
KENDZIERSKI, LOTTIE H. Eternal Matter and Form in Siger of Brabant 223
KLUBERTANZ, GEORGE P., S.J. Being and God according to Contemporary Scholastics 1
MEIGNE, MAURICE, S.J. Complexity of Mathematical Logic ..205, 313
MILLER, ROBERT G., C.S.B. The Ontological Argument in St. Anselm and Descartes 341
NATANSON, MAURICE. The Concept of the Given in Peirce and Mead 143
ONG, WALTER, S.J. Ramus and the Transit to the Modern Mind .. 301
OSTERMANN, ROBERT. Gabriel Marcel: Existence and the Idea of Being 19
OWENS, JOSEPH, C.SS.R. The Causal Proposition—Principle or Conclusion? 150, 257, 323
VOGEL, ARTHUR A. Efficient Causation and the Categories 243
WHITTEMORE, ROBERT C. Whitehead's Process and Bradley's Reality 56
WILHELMSEN, FREDERICK D. The Philosopher and the Myth 39
WOLZ, HENRY C. The *Republic* in the Light of the Socratic Method 115

NOTES AND DISCUSSION

Chronicle 75, 176, 270, 312
BRUGGER, WALTER, S.J. Fourth German Congress of Philosophy, Stuttgart, 1954 222
FISHER, ALDEN L. International Congress for Philosophy of Science, Zürich 158
RESCHER, NICHOLAS. Monads and Matter: a Note on Leibniz's Metaphysics 172

THRO, LINUS J., S.J. Seventh Annual Meeting of the Missouri State Philosophy Association 114

CURRENT BIBLIOGRAPHY 81, 191, 294, 376

NOTES ON FOREIGN BOOKS 271

BOOKS REVIEWED

AVICENNA. *Livre des directives et remarques* (Richard Gramlich, S.J.) . 350
ARNOLD, MAGDA, and GASSON, JOHN A., S.J. *The Human Person* (Francis L. Harmon) 288
BALLOU, RICHARD B. *The Individual and the State* (Thomas D. Langan) 356
BARTER, E. G. *Relativity and Reality* (Edward Caldin) 369
BESTOR, ARTHUR E. *Educational Wastelands* (Thomas D. Langan) . 356
BISNO, HERBERT. *The Philosophy of Social Work* (John P. Jelinek, S.J.) 183
COLLINS, JAMES. *A History of Modern European Philosophy* (Vincent Edward Smith) 360
———. *The Mind of Kierkegaard* (John Wild) 186
CROMBIE, A. C. *Augustine to Galileo. The History of Science A. D. 400-1650* (Vernon J. Bourke) 362
CUNNINGHAM, WILLIAM F., C.S.C. *General Education and the Liberal College* (Thomas D. Langan) 356
DEFEVER, JOSEPH, S.J. *La preuve réele de Dieu* (Joseph de Finance, S.J.) 291
DUHEM, PIERRE. *The Aim and Structure of Physical Theory* (Edward Caldin) 369
GERHART, EUGENE C. *American Liberty and "Natural Law"* (Marianne M. Childress) 363
HUTCHINS, ROBERT M. *The Conflict in Education* (Thomas D. Langan) 356
KANE, WILLIAM H., O.P., CORCORAN, JOHN D., O.P., ASHLEY, BENEDICT H., O.P., and NOGAR, RAYMOND J., O.P. *Science in Synthesis* (Joseph F. Wulftange, S.J.) 282
LENZEN, VICTOR F. *Causality in Natural Science* (Edward Caldin) ... 369
Les etudes philosophiques octobre-décembre, 1952 (Joseph de Finance, S.J.) 177
MARC, ANDRE, S.J. *Dialectique de l'affirmation. Essai de métaphysique réflexive* (Armand Maurer, C.S.B.) 373

MELLAND, BERNARD E. *Higher Education and the Human Spirit* (Thomas D. Langan) 356
NUTTIN, JOSEPH. *Tâche, réussite et échec* (Francis L. Harmon) 288
RYAN, JOHN K. (ed.). *Philosophical Studies in Honor of the Very Reverend Ignatius Smith,* O.P. (Vincent Edward Smith) 290
SMITH, NORMAN KEMP. *New Studies in the Philosophy of Descartes* (Henry G. Wolz) 77
STRAUSS, LEO. *Natural Right and History* (Marianne M. Childress) .. 363
TAYLOR, HAROLD. *On Education and Freedom* (Thomas D. Langan) .. 356
The Teaching of Philosophy: An International Enquiry of UNESCO (James Collins) 282
THOMAS AQUINAS, ST. *The Division and Methods of the Sciences* (Joseph F. Wulftange, S.J.) 282
VAN LAER, HENRY. *Philosophico-scientific Problems* (Edward Caldin) 369
WARNOCK, G. J. *Berkeley* (James Collins) 182
WILD, JOHN. *Plato's Modern Enemies and the Theory of Natural Law* Marianne M. Childress) 363
———. (ed.). *The Return to Reason* (James Collins) 177

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